BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1994/95
REPORT #:	PAP 94-45
NAME:	L.C. MARLOW

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

* One technical report to be completed for each project area
* Refer to Program Requirements/Regulations, section 15, 16 and 17
* If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT

Name L.C. Marlow. Reference Number 94-95-P139.

LOCATION/COMMODITIES

Project Area (as listed in Part A.) Coal creek Minfile No. if applicable RGEN0100.

Location of Project Area NTS 92P 2 W. Lat 51 11 33 Long 120 55 38

Description of Location and Access Turn east past Clinton off Highway 97 onto chasm logging road then on 3300 logging road. Property starts at 48 Km. sign. Property centered north of junction of Coal and Hamilton creeks.

Main Commodities Searched For Diatomaceous siltstones and shales, and Bentonite.

Known Mineral Occurrences in Project Area Vidette Gold Mine just south in Kamloops Mining Division.

WORK PERFORMED

1. Conventional Prospecting (area) 1200 hectares.
2. Geological Mapping (hectares/scale) 1200 " . 1cm = 25 m.
3. Geochemical (type and no. of samples)
4. Geophysical (type and line km)
5. Physical Work (type and amount) 8 Km picket grid 25m stns. cutout + pace
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify)

SIGNIFICANT RESULTS (if any)

Commodities Diatomite - Bentonite. Claim Name Bentonite 1 Ben 1-2.

Location (show on map) Lat 51 11 33 Long 120 55 38 Elevation 2950' - 3400 - 3500

Best assay/sample type Diatomaceous. Water and Oil retention. 3450' approx. elevation

Description of mineralization, host rocks, anomalies Miocene river channels, completely altered to clays. Diagenis alteration. Diatomaceous siltstone on top of clays. Chilcotin basalt capping real thin.

Supporting data must be submitted with this TECHNICAL REPORT.

Prospecting, Rock Geochemistry and

Grid Construction Reports

on the

Bentonite-Diatomaceous Property

Clinton Mining Division

British Columbia

N.T.S 92 P 2

Latidute 51 11 33 North

Longitude 120 55 38 West

Covering the Bentonite 1-12, Ben 1-5

ZEE 1-7 and the ZEOBED #2

(44 units.) located north from the

confluence of Hamilton and Coal creeks.

Work performed between Sept. 18, 1994-Nov.28,1994.

Owners.

L.C. Marlow, W.T. Hall and Dave Duguay.

By, L.C. Marlow.
Jan. 26, 1995

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Figure 1. Location Map
Figure 2. Claim Map
Figure 3. Land Use Map
Figure 4. Geology Map
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Figure 6. Grid, Sample Location and Geology Map - In Pocket.

Summary:

Between Sept, 18 and Nov, 28 1994, the Bentonite-Diatomaceous Property was prospected and mapped, eight km.of grid constructed, samples taken and then typed in the grid. A total of forty-six man days were spent on the field program and two on the report.

Introduction:

This report outlines the results of the recent prospecting, sampling and grid construction completed on the Bentonite-Diatomaceous Property. The work described in this report was completed by two of the owners with one other person being hired for five days.

A prospecting grant helped fund the work. This report is also intended to satisfy accessment and grant requirements.

A series of maps showing property and claim location as well as grid, sample, locations, geology and prospecting traverses are included in this report. The cost of the work program was $13,497.58.

Location, Access and Physiography:

The Bentonite-Diatomaceous Property lies at the confluence of Hamilton and Coal creeks within the Clinton Mining Division on N.T.S. 92 P 2W.(Figure 1) The property is also in the Caribou-Chilcotin land use plan and lies in an enhanced resourse area. The property can be reached by two routes.

The first and most direct route, is by travelling north on the Caribou Hwy. approx. sixteen km. north of Clinton, then turning right, east, on the Chasm logging road and proceding onto the thirty-three-hundred road until the forty-eight km. sign. The property starts here.(See Figure 1)

The alternate route is by taking the Loon Lake road north approx. twenty-two km. north of Cache Creek. Travel past Loon Lake until the thirty-three-hundred road then turn east for approx. twelve km.(See Figure 1)

The property covers approx. eleven-hundred hectares and is centered approx. one km. north-northwest of the confluence of Hamilton and Coal creeks. The claim area varies in elevation from the valley floor twenty-nine-hundred feet to thirty-six-hundred feet. The valley is mainly natural meadow with sparse fir trees on the hillside to mature fir on the benches.South of Hamilton Creek there are thick stands of Jack pine and spruce.

Precipitation in the area is low, being comparible to Clinton.

Outcrops are common especially to the south where, Fullers earth, Bentonite can be traced eight-hundred meters east-west. To the north of the road cut slumping predomnates with a thin capping and talus of Chilcotin basalt, outcropping on top of the hill at approx. eight-hundred meters south on a control line three + zero, zero west-

around Small Lake. North of camp, two + zero, zero east, zero + zero, zero north. Slumping is prevalent all the way to where the Bentonite outcrops in the creek.

Basalts along the lower road north of camp although huge and thought to be in place were proven to have slid downhill with the underlying Bentonite. Diatomaceous shale was found at higher elevations.

Property and Ownership:

The property consists of twenty-four two-post units and one-twenty unit modified grid claim.(See Figure 2) Details of the claims are as follows are found in Table one.

The claims are grouped together as the Bentonite-Diatomaceous Property (EVENT #3064825 JAN,24/95) . The owners are L.C. Marlow and Dave Duguay of Kamloops B.C., and W.T. Hall of Barrier B.C.

History

Although not much imformation can be found on the area, where the claims sit, the whole area has been extensively worked over the years because of the proximity of the Vidette gold mine.

Regional Geology

The oldest rocks in the region are Nicola sediments and volcanics. The sediments are greywackeys, siltstones, argillites and massive grey limestones. The volcanics are greenstones and are mainly andesites and augite andesite porphys.

There are some leuco-quartz monzonite outcroping north of the claim area. These are part of the Thuya batholith and are of Jurassic age.

There are several mio-channels on the mapsheet and they are known as the Deadman River Formation. These are overlain by basalts known as the Chasm Formation.(See Figure Three + Four)

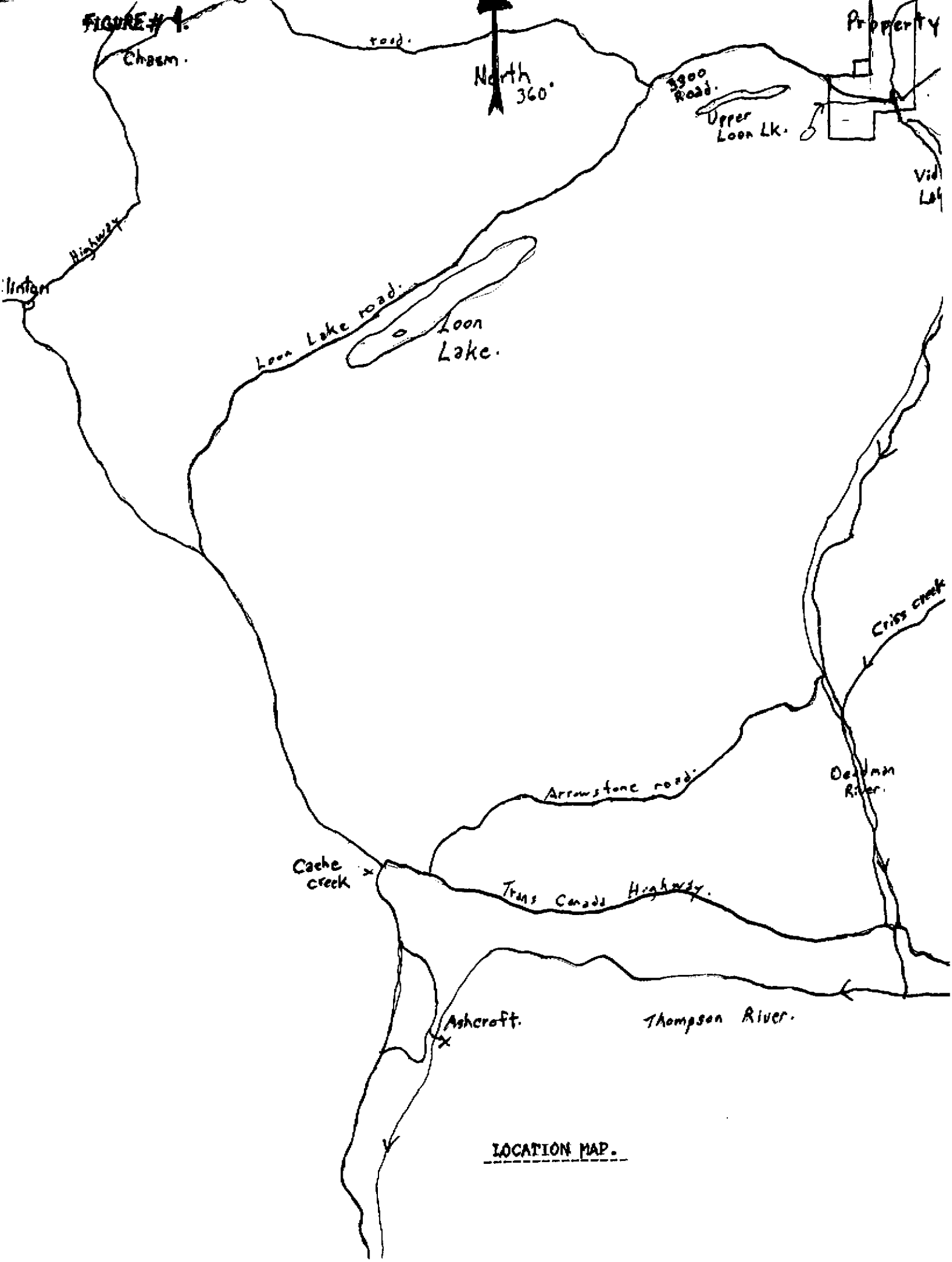
Property Geology:

The property consists of Nicola volcanics, some Nicola sediments, contacting on mainly the east side and underneath of the Mio-Hamilton-Mio Coal channels. Both of these are overlain by Chilcotin basalt. The Mio-channels are host to the Diatomaceous shales and Bentonite. What was once silt to boulder size river rock has been completly altered to clay, mainly Montmorlilonite.

The Diatomaceous sits on top of the Bentonites and in some places in contact with the Chilcotin basalts that overlie the channels.

Table #1

CLAIM NAME	UNITS	RECORD NO	EXPIRY DATE
ZEOBED 2	20	324758	APRIL,20/95
ZEE 1	1	324791	APRIL,21/95
ZEE 2	1	324792	APRIL,21/95
ZEE 3	1	324793	APRIL,21/95
ZEE 4	1	324794	APRIL,21/95
ZEE 5	1	324795	APRIL,21/95
ZEE 6	1	324796	APRIL,21/95
ZEE 7	1	324797	APRIL,21/95
BENTONITE 1	1	324688	APRIL,14/95
BENTONITE 2	1	324689	APRIL,14,95
BENTONITE 3	1	324690	APRIL,14/95
BENTONITE 4	1	324691	APRIL,14,95
BENTONITE 5	1	324692	APRIL,16/95
BENTONITE 6	1	324693	APRIL,16/95
BENTONITE 7	1	324694	APRIL,16/95
BENTONITE 8	1	324695	APRIL,16/95
BENTONITE 9	1	324696	APRIL,16/95
BENTONITE 10	1	324697	APRIL,16/95
BENTONITE 11	1	324698	APRIL,16/95
BENTONITE 12	1	324699	APRIL,16/95
BEN 1	1	325285	APRIL,23/95
BEN 2	1	325215	APRIL,23/95
BEN 3	1	325216	APRIL,23/95
BEN 4	1	325217	APRIL,28/95
BEN 5	1	325218	APRIL,28/95



LOCATION MAP.

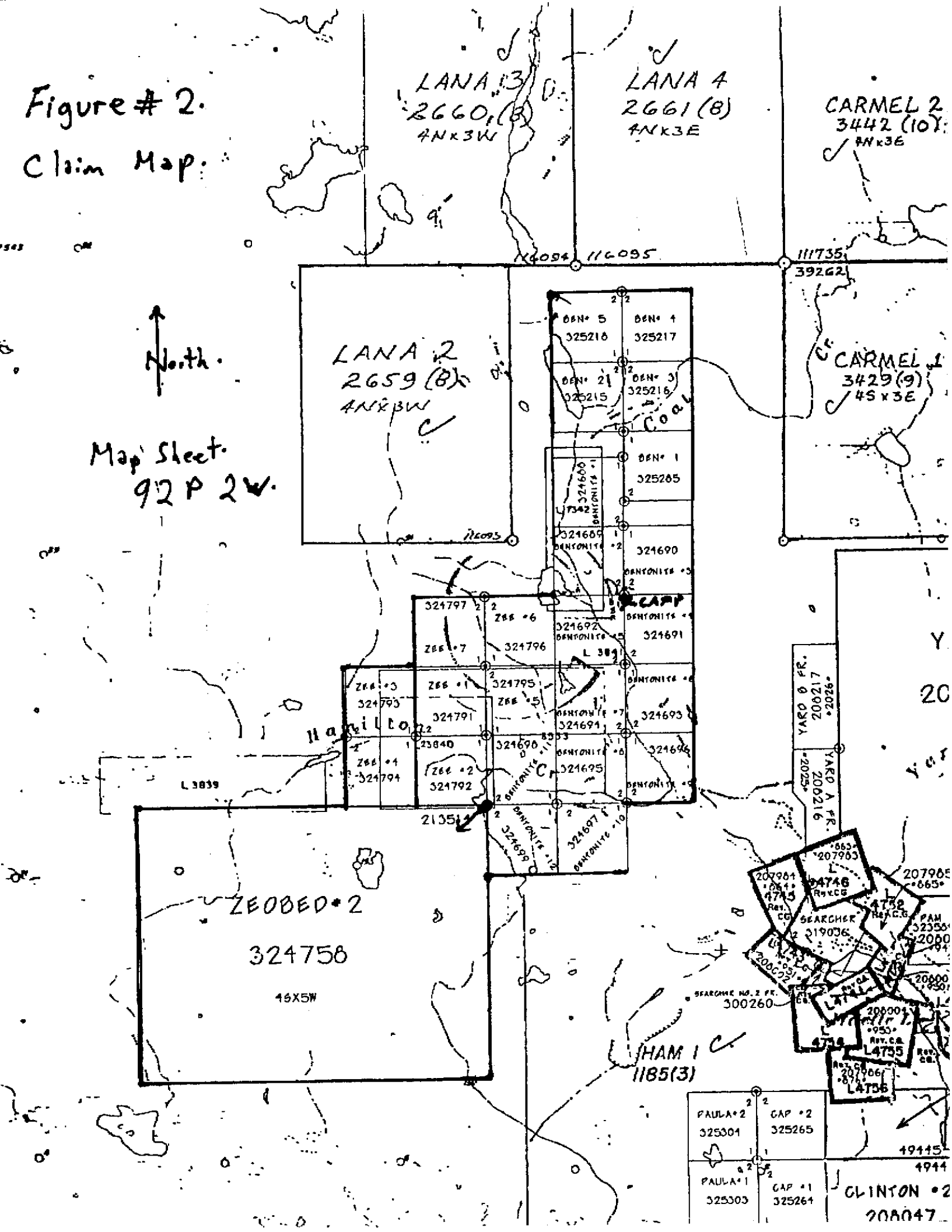


Figure # 2.
Claim Map:
North.
Map Sheet.
92 P 2W.
LANA 3
2660 (8)
4N x 3W
LANA 4
2661 (8)
4N x 3E
CARMEL 2
3442 (10)
4N x 3E
LANA 2
2659 (8)
4N x 3W
CARMEL 1
3429 (9)
4S x 3E
111735
39262
111095
111094
BEN# 5
325218
BEN# 4
325217
BEN# 2
325215
BEN# 3
325216
Coal
BEN# 1
325285
324690
324797
ZEE #6
324796
324691
ZEE #7
ZEE #3
324793
ZEE #1
324795
ZEE #5
324791
324693
ZEE #4
324794
ZEE #2
324792
324695
324697
324699
L 3839
2135
ZEOBED#2
324758
46X5W
HAM 1
1185(3)
YARO 6 FR.
206217
YARO A FR.
206216
SEARCHER
319036
SEARCHER NO. 2 FR.
300260
PAULA#2
325301
CAP #2
325265
PAULA#1
325303
CAP #1
325264
CLINTON #2
208047

Figure #3.

the new protected areas, while existing activities such as hunting, recreation, and backcountry tourism will be allowed. Cattle grazing will continue to be permitted in the new protected areas, with the exception of the Junction Sheep Range.

A Regional Resource Board

A Regional Resource Board – covering the Cariboo Forest Region – will be established to provide local input on implementation of this land-use plan. The Cariboo Economic Action Forum will continue to provide advice to government on the development of regional economic strategies, priorities and action plans.

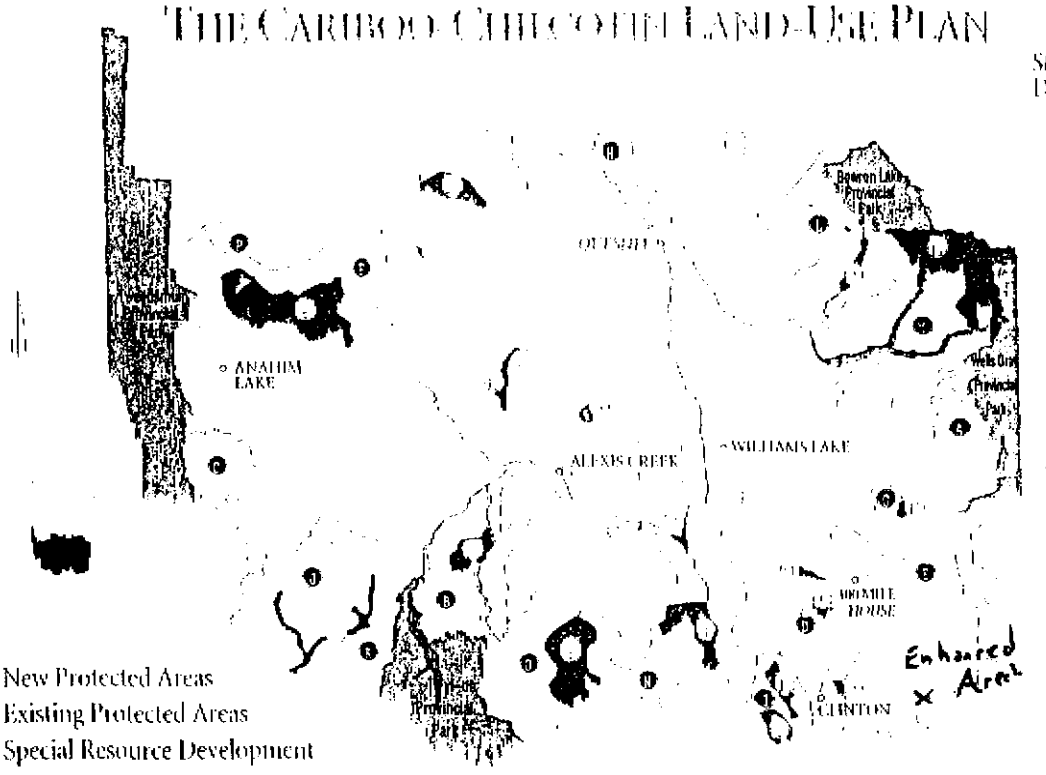
A Cariboo-Chilcotin Jobs Strategy:

Ensuring Worker And Community Security

The government has committed that jobs will not be lost as a result of major land-use decisions. The Cariboo-Chilcotin Land-Use Plan fulfils that promise, and goes further by creating new jobs:

- The Forest Renewal Plan has invested $3 million in the Cariboo-Chilcotin, creating more than 150 jobs in the region's forests.
- With this plan, a new Grazing Enhancement Program is being created: the Cariboo-Chilcotin ranching industry will receive $2.5 million per year to maintain or enhance cattle grazing opportunities in the region and meet conservation needs.
- The Cariboo-Chilcotin Jobs Strategy—being introduced with this land-use plan—will see about 1,000 jobs created over the next three years. Economic initiatives included in this strategy will be unveiled in the days and weeks following release of the land-use plan.
- A new, full-time Resources Jobs Commissioner will be appointed to work with companies, workers, communities and government to secure stable resource jobs now and in the future.
- Under the government's Skills Now training plan, two Community Skills Centres will be established, and five small business partnerships and at least two sectoral training partnerships created.

The Cariboo Chilcotin Land-Use Plan



Special Resource Development

A. Ross / Deception
B. Britton Triangle
C. Charlotte Alplands
D. Hat Lake
E. Interlakes
F. Itcha Ilgachuz
G. Long Lake / School House
H. Lower Blackwater
I. Marble Range
J. Niut
K. Potato Range
L. Quesnel Highlands
M. Quesnel Lake
N. South Chilcotin
O. Taseko Lake
P. Upper Blackwater

New Protected Areas

1. Big Creek / South Chilcotin
2. Caribou River
3. Chasm
4. Down Creek
5. Edge Hills
6. Hat Lake
7. Henrietta River / Tatlayoko
8. Itcha Ilgachuz
9. Junction Sheep Range
10. Kluskoil Lake
11. Long Lake / School House
12. Marble Range
13. Mitchell Lake / Niagara
14. Moose Valley
15. Nazko Lakes
16. Stum Lake
17. Taseko

Figure #4.

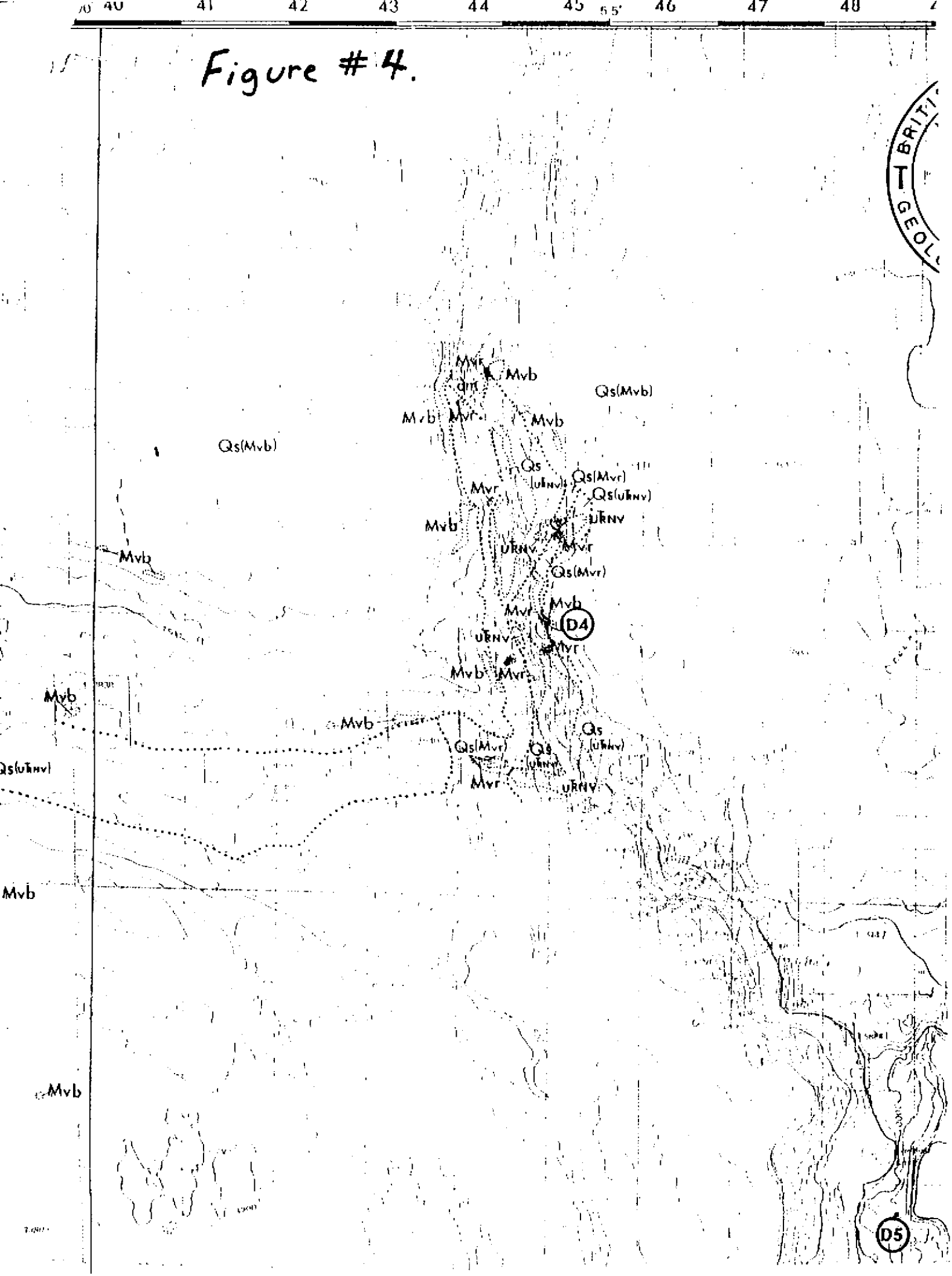

40
41
42
43
44
45
55'
46
47
48
Mvr
Mvb
Qs(Mvb)
Qs
(uRNv)
Qs(Mvr)
Qs(uRNv)
uRNv
D4
D5

Figure #5

92P/3

121°50'
51°15'

79

FM5678000mN

77

76

75

74

73

72

71

10'

70

59

8

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

OPEN FILE 1989-21

TERTIARY STRATIGRAPHY AND INDUSTRIAL MINERALS, BONAPARTE TO DEADMAN RIVERS

NTS 92P/2, 3

GEOLOGY BY P. B. READ

QUATERNARY
PLEISTOCENE AND RECENT

Qs(Evd) Unconsolidated sediments: glacial deposits, colluvium and alluvium; few if any crops; probable subcrop unit within parentheses

TERTIARY
MIOCENE
CHILCOTIN GROUP
Chasm Formation
Mvb Vesicular and amygdaloidal basalt flows; very rare basalt breccia Cap Rock

Deadman River Formation
Mvr Rhyolite ash, white to buff tuffaceous sandstone, siltstone and shale; minor pe conglomerate, and carbonaceous siltstone and shale; local diatomaceous shale siltstone Host Rock.

MIDDLE EOCENE
KAMLOOPS GROUP
Evd Light to dark grey, aphanitic andesite flows

Light grey porphyritic (hornblende) andesite flows

Medium to dark grey porphyritic (plagioclase) andesite breccia; minor flows

Evdx Light to dark grey aphanitic andesite breccia

Dark grey vesicular and amygdaloidal, aphanitic basalt flows and breccia

Cream-weathering rhyodacite breccia, brown-weathering andesite breccia; min intercalated lithic tuff

Cream weathering shale, siltstone, carbonaceous shale; zeolitized, bedded rhyoli tuff and tuffaceous sandstone lenses

Volcanic pebble to boulder conglomerate; minor layered lithic ash

Everything is slumped toward the main valleys and perhaps this has thrown people off to the size potential of the Diatomaceous materials. No Diatomaceous has been found west of Coal creek but there is good potential in the upper strata of channel around eight + zero, zero south C.L. three + zero, zero west.

The known Diatomite oucrops at zero + five, zero south L. two + zero, zero east and as far as eight + zero, zero north-one + zero, zero east for at least eight hundred-fifty meters strike and at least fifty meters width. The Diatomite is four-five meters thick and a meter weighs almost two tons, Diatomite is found in slumps even in the valley floor where it has slumped down. By the camp and north of camp taking dips is useless as everything is dipping downhill.

On the thirty-three-hundred road the channel is striking west-southwest, not south as previously supposed and is up to eighthundred meters wide.

The channel is very homogeneous as seen by the whole rock analysis and C.E.C. analysis which were taken over a large area.

1994 Field Program

Introduction:

The objectives of the program were to prove the size and consistency of the Bentonites and to try and get enough tonnage of the Diatomaceous to prove a viable deposit that could be brought into production in a short while. Both of these objectives have been met with successful results. Because of the steep side hills and the late start, snow became a problem and slowed us down, especially the grid construction.

Prospecting

The whole claim area was prospected and any showings or contacts were typed into the grid.(See Figures) On the traverses to the north along the upper side of the lower road more Diatomaceous sections were found using a bar and shovel, but were unable to tie the showings into the grid because of steep terrain and just enough snow to make conditions impossibly trecherous.

Grid Construction:

The grid was constructed so that sample outcrops and contacts and stratighraphy could be mapped.

The grid was cut out and blazed with axes, chained, pickets placed at twenty-five meter intervals. Orange paint was used on blazes and pickets. The line was marked with orange flaggings and stations marked with orange and blue.

Sampling:

The main exposer by camp was sampled in detail as it offers th greatest vertical stratigraphy. Nine chip samples were taken for a total distance across stratigraphy of twenty-eight meters.(See Figure 5-inset a) The samples were all chipped accross one meter or wider widths. Four duplicate sets of samples were taken for testing at home and over eight-hundred-fifty metersstrike length while the Bentonite was sampled over three km. long over one-half km. wide,and twenty-eight meters thick.

Analytical Methods:

Four samples were X-Ray Diffractioned at X-Ral in Toronto and scanned for specific minerals, excluding clays.(No Zeolites)

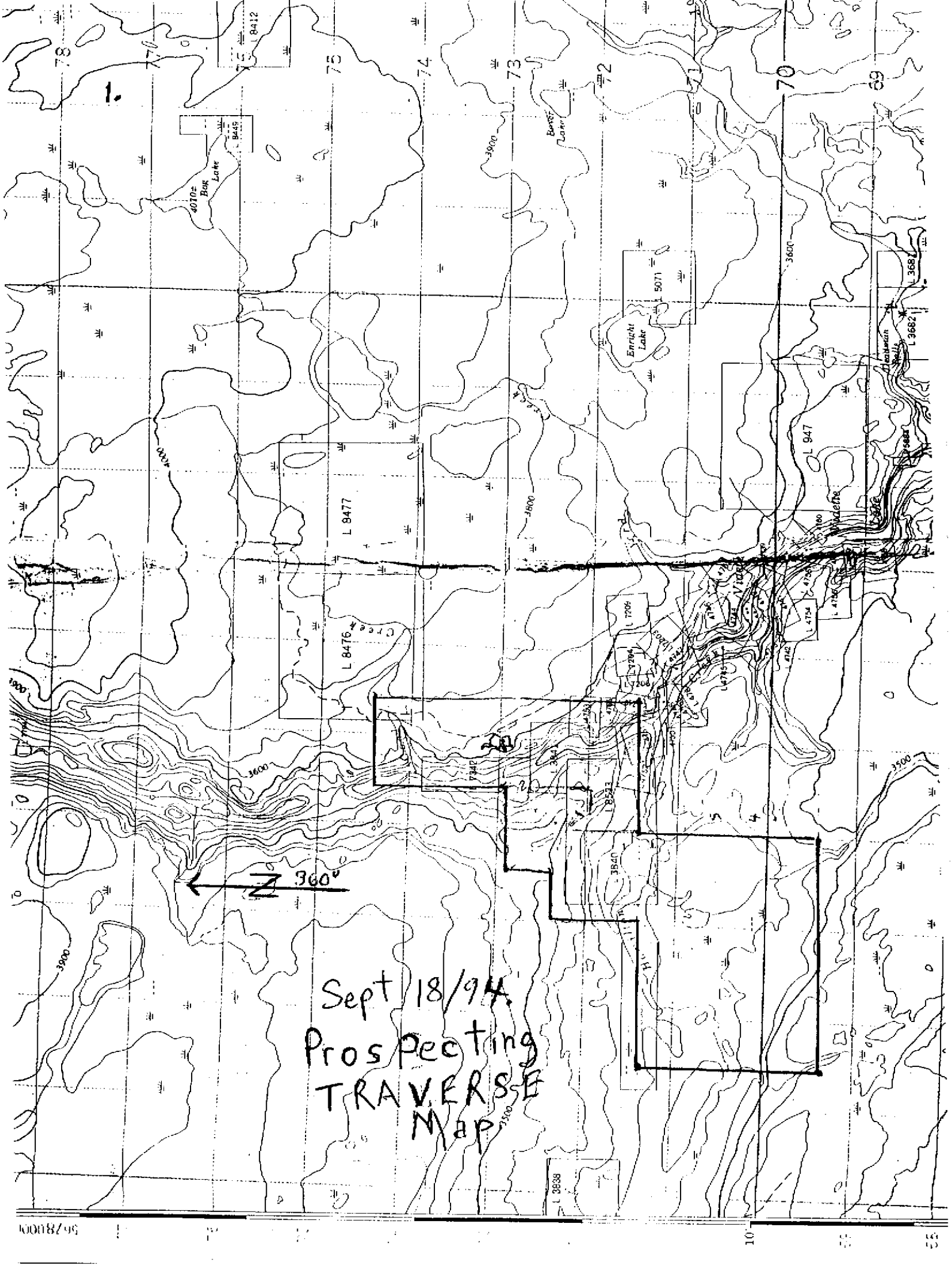
Twelve samples were analysed for oil + water retention, nine samples were analysed for specific gracify, seven samples were done for Ph. and eighteen samples done for Cat Ion Exchange Capacity. **Three samples were X-rayed at U.B.C.** (Appendix5).

In addition samples have been tested at home and thirty-three-zero,one exhibits enhanced properties leached in citric acid, lemon juice. The Diatomite also has a eight % better absorbtion of water and a nineteen % better absorbtion of oil than the best of what is being sold on the market. Also we have successfully made Pozzolon cement without calcining the Bentonite. This is a continuously ongoing process.

References:

Open file: 1989-21.

Appendix i


1.
Bag Lake
Bantz Lake
Enright Lake
L 8477
L 8476
L 947
L 5071
L 8412
L 8415
L 3682
L 3838
L 8543
L 7849
L 7204
L 4734
L 4742
L 4736
L 4760
L 4745
L 4753
L 4755
L 4756
L 4757
L 4758
L 4759
L 4761
L 4762
L 4763
L 4764
L 4765
L 4766
L 4767
L 4768
L 4769
L 4770
L 4771
L 4772
L 4773
L 4774
L 4775
L 4776
L 4777
L 4778
L 4779
L 4780
L

Appendix ii

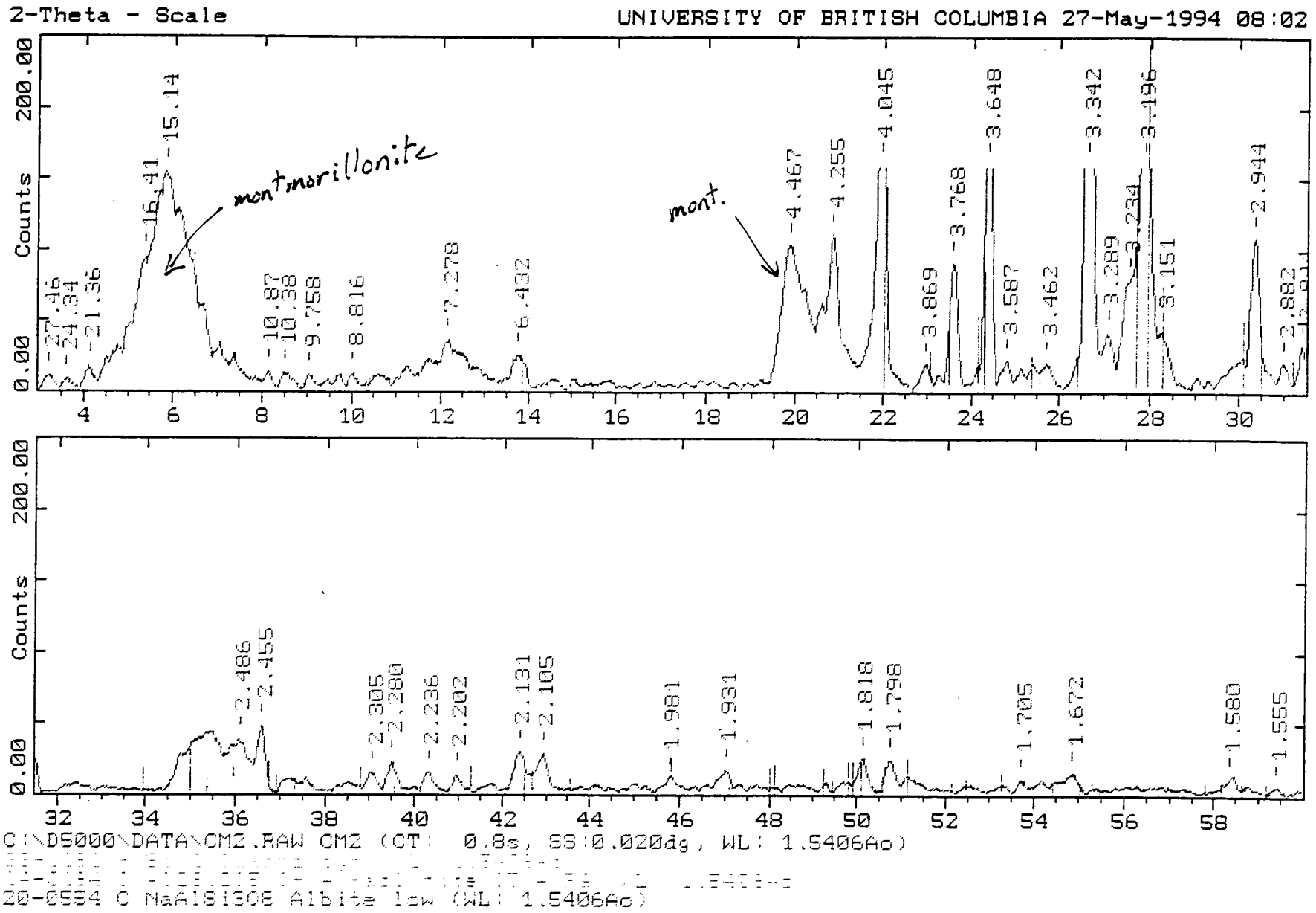

2-Theta - Scale
UNIVERSITY OF BRITISH COLUMBIA 27-May-1994 08:02
Counts
200.00
0.00
montmorillonite
mont.
-15.14
-16.41
-27.46
-24.34
-21.36
-10.87
-10.38
-9.758
-8.816
-7.278
-6.432
-4.467
-4.255
-4.045
-3.869
-3.768
-3.648
-3.587
-3.462
-3.342
-3.289
-3.234
-3.196
-3.151
-2.944
-2.882
-2.486
-2.455
-2.305
-2.280
-2.236
-2.202
-2.131
-2.105
-1.981
-1.931
-1.818
-1.798
-1.705
-1.672
-1.580
-1.555
C:\DS000\DATA\CM2.RAW CM2 (CT: 0.8s, SS:0.020dg, WL: 1.5406Ao)
20-0554 C NaAlSi3O8 Albite low (WL: 1.5406Ao)

Fig. 2

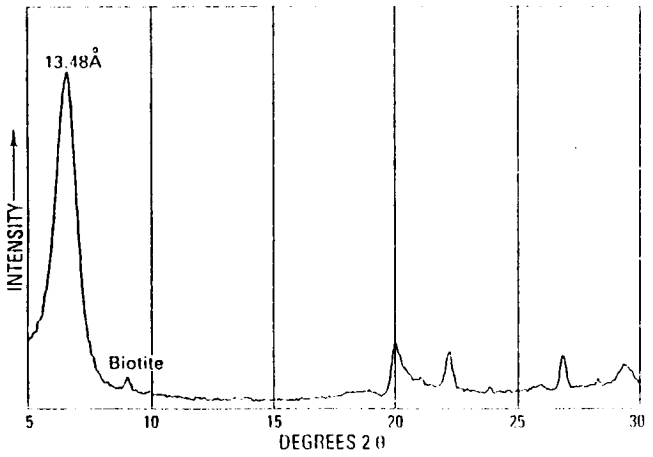


FIGURE 3.—X-ray diffraction trace of sodium-bentonite (montmorillonite) from the Clay Spur Bentonite Bed of the Mowry Shale, Crook County, Wyo.

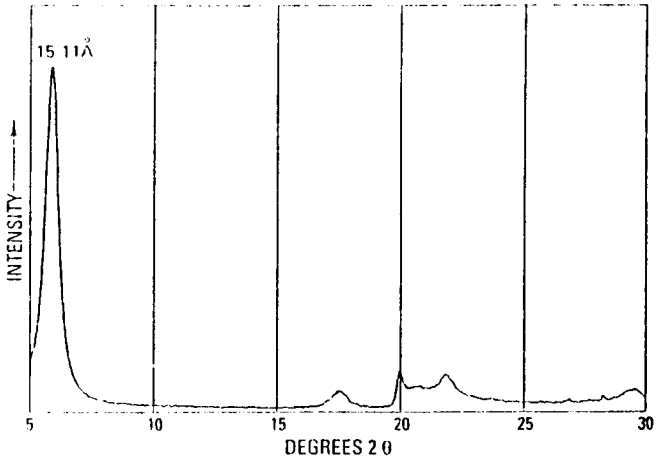


FIGURE 4.—X-ray diffraction trace of calcium-bentonite (montmorillonite) from the Yegua Formation, Claiborne Group, Gonzales County, Tex.

primarily used in animal feed, but both sodium-bentonite and attapulgite are used in all types of fillers.

Sealant and waterproofing.—Approximately 2 percent of the bentonite produced in the United States is used as a sealant to reduce water seepage from ponds and irrigation ditches (Ampian, 1988). It is also used to waterproof the outside basement walls of homes and other structures (Mielenz and King, 1955). Sodium-bentonite is the best type used for sealant and waterproofing because of its swelling capacity, but a small amount of calcium-bentonite is also used. There is probably a large quantity of bentonite and bentonitic clay used locally for sealing irrigation ditches and stock ponds that is not included in the U.S. Bureau of Mines annual production statistics.

Catalyst.—Small amounts of bentonite are used for catalytic cracking of heavy petroleum fractions (Grim, 1962, p. 309). This use requires high-purity bentonite to be treated with sulfuric or hydrochloric acid to remove alkalies, alkaline earths, and iron and partially to remove magnesium and aluminum. Calcium-bentonite is the most suitable clay for this purpose.

MINERALOGY

Both bentonite and fuller's earth are rocks composed predominantly of one clay mineral plus small amounts of fine-grained nonclay minerals. Bentonite consists chiefly of one or more members of the smectite-group (formerly the montmorillonite-group) minerals. Fuller's earth also consists chiefly of either a smectite-group mineral or palygorskite (attapulgite).

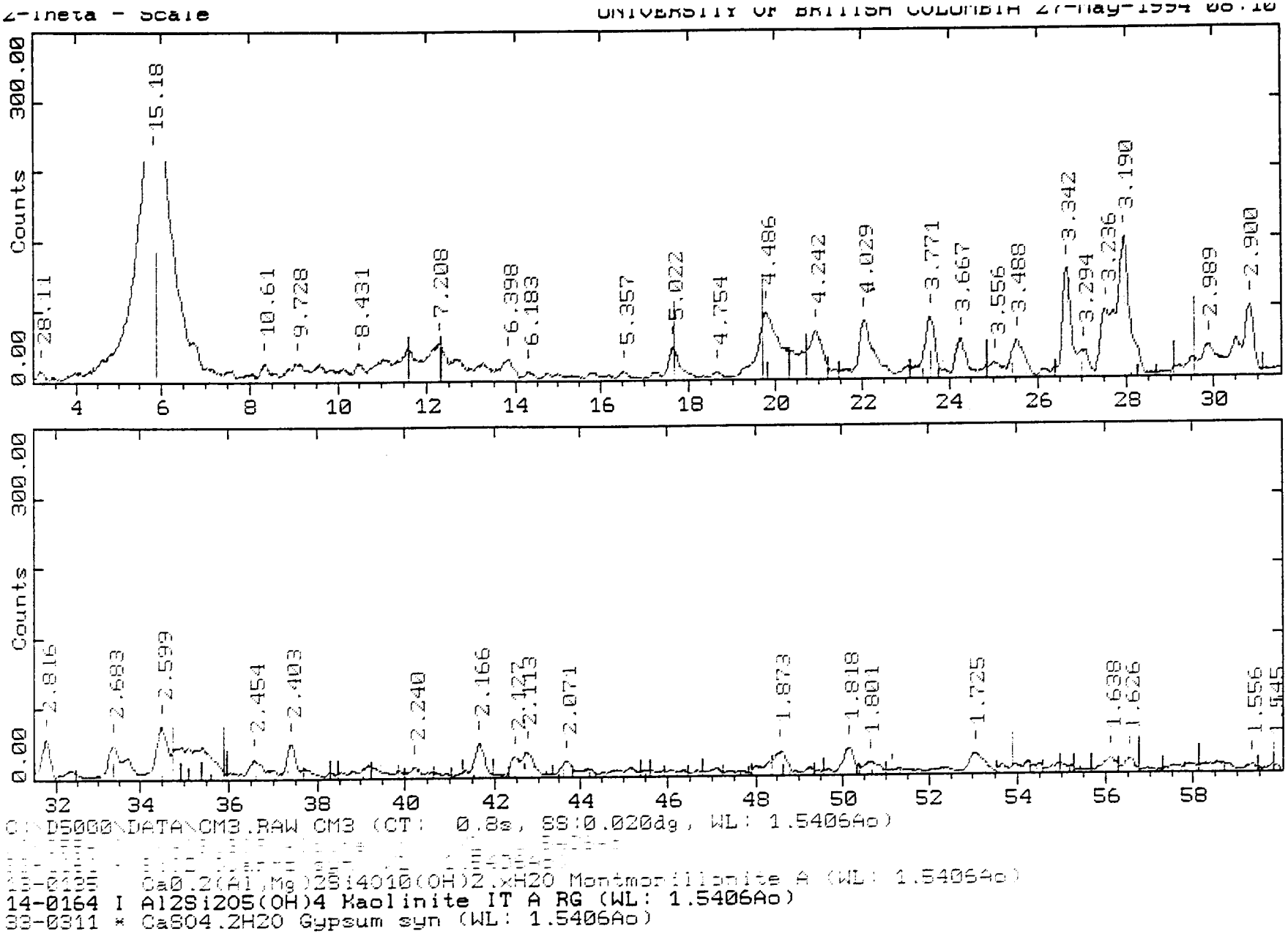
The smectite minerals have a layered crystal structure in which two silica tetrahedral sheets, enclosing an alumina octahedral sheet, are separated by an interlayer space containing an exchangeable ion(s) and water molecules. The theoretical formula is considered to be:

$$(OH)_4Si_8(Al_{3.34}Mg_{0.66})O_{22}$$
$$\Downarrow$$
$$\text{Na or } Ca_{0.66}{\cdot}nH_2O$$

The arrow indicates a charge deficiency that must be satisfied by an exchangeable ion in the interlayer space. Sodium is the dominant exchangeable ion in the Wyoming (Na or swelling) bentonites (fig. 3), and calcium is the dominant ion in the southern (Ca or nonswelling) bentonites (fig. 4). Smectite is recognized on the X-ray diffraction (XRD) traces by its very strong basal (001) peak at about 14 Å, which expands to about 17 Å when saturated with ethylene glycol and collapses to 10 Å when heated to 350 °C for a minimum of 30 min.

The smectite-group minerals are divided into two subgroups—trioctahedral and dioctahedral. The trioctahedral smectites are represented by saponite (fig. 5) and hectorite (fig. 6) as end members of a magnesium-lithium series. The dioctahedral smectites are represented by beidellite, nontronite, and montmorillonite as end members of a aluminum-iron-magnesium series. For detailed discussion of the chemistry of the smectite-group minerals, the reader is directed to Ross and Hendricks (1945).

During the work leading to this report, the senior author investigated many deposits of bentonite and Wolfbauer (1977; Frahme (1978) reviewed a large quantity of data resulting from tests by the U.S. Bureau of Land Management. The U.S. Bureau of Land Management has also studied relation between the physical properties and exchangeable cations of bentonite (Regis, 1978a,b). The grit content, water-soluble salt content, and exchangeable cations of bentonite from many deposits in the United States are in table 1.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UNIVERSITY OF BRITISH COLUMBIA 27-May-1994 08:10
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0.00
-15.18
-12.11
-10.61
-9.728
-8.431
-7.208
-6.398
-6.183
-5.357
-5.022
-4.754
-4.486
-4.242
-4.029
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-3.294
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-2.900
4
6
8
10
12
14
16
18
20
22
24
26
28
30
-2.816
-2.683
-2.599
-2.454
-2.403
-2.240
-2.166
-2.127
-2.113
-2.071
-1.873
-1.818
-1.801
-1.725
-1.638
-1.626
-1.556
-1.545
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56
58
C:\DS800\DATA\CM3.RAW CM3 (CT: 0.8s, SS:0.020dg, WL: 1.5406Ao)
14-0164 I Al2Si2O5(OH)4 Kaolinite IT A RG (WL: 1.5406Ao)
33-0311 * CaSO4.2H2O Gypsum syn (WL: 1.5406Ao)

Fig. 3

Appendix iii

WHOLE ROCK ANALYSIS.

Eco-Tech LABORATORIES LTD.

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ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Fax (604) 573-4557

CERTIFICATE OF ANALYSIS ETK94-923

CHUCK MARLOW
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

28-Nov-94

3 samples received November 2, 1994

ET #.	Tag #	BaO	P205	SIO2	MnO	Fe203	MgO	Al203	CaO	TiO2	Na2O	K20	L.O.I.
1	B105	0.06	0.01	57.34	0.06	7.13	2.09	16.53	2.03	0.85	1.46	1.05	11.40
2	B108	0.05	0.01	57.88	0.17	5.98	1.32	16.67	2.39	0.86	1.50	0.29	12.90
3	D1	0.08	0.01	62.21	0.03	4.95	1.37	12.11	1.04	0.71	0.86	0.91	15.73

QC/DATA

Standards:												
MRG1	0.04	0.04	38.92	0.17	17.41	13.40	8.32	14.37	3.77	0.72	0.44	2.40
SY2	0.09	0.55	59.71	0.32	6.26	2.93	12.06	7.70	0.15	4.24	4.16	1.84

Note: Values expressed in percent

ECO-TECH LABORATORIES LTD.
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B.C. Certified Assayer

XLS/Kmisc7
df/wr939

WHOLE ROCK ANALYSIS.

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Fax (604) 573-4557

CERTIFICATE OF ANALYSIS ETK95-26

CHUCK MARLOW
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

20-Jan-95

1 ROCK sample received January 17, 1995

Values expressed in percent

ET #.	Tag #	BaO	P205	SiO2	MnO	Fe203	MgO	Al203	CaO	TiO2	Na2O	K20	L.O.I.
1	33-01	0.11	0.12	62.30	0.04	5.93	0.93	16.90	2.19	0.69	1.94	1.73	5.65
QC/DATA:													
Repeat:													
1	33-01	0.10	0.11	63.10	0.04	5.98	1.03	17.10	2.23	0.67	1.97	1.55	5.89

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XLS/Kmisc95
df/wr26

4-Jan-95

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 2J3

Phone: 604-573-5700
Fax : 604-573-4557

CHUCK MARLOW ETK 923
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

3 pulp samples received November 2, 19
Telephone request : December 30, 19

Values in ppm unless otherwise reported

Et #.	Tag #	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti
2	B108	<.2	1.44	35	135	<5	0.64	<1	19	14	21	2.28	<10	0.39	1107	<1	0.04	16	40	14	<5	<20	73	0.
3	D1	<.2	0.84	20	170	<5	0.27	<1	12	26	53	2.02	10	0.45	140	<1	0.07	19	230	32	5	<20	70	0.

QC DATA

Repeat:

2	B108	<.2	1.35	30	130	<5	0.59	<1	17	13	20	2.13	<10	0.36	1046	<1	0.04	16	50	12	5	<20	68	0.
Standard:		1.0	1.74	70	170	5	1.74	1	20	66	80	4.07	<10	0.96	704	<1	0.01	22	650	20	15	<20	58	0.

ECO-TECH
Frank J. P
B.C. Certif

XLS/Kmisc8
df/923

14-Dec-94

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 2J3

Phone: 604-573-5700
Fax : 604-573-4557

CHUCK MARLOW ETK 94-1005
2 - E 7155 EAST TRANS CANADA H
KAMLOOPS, B.C.
V2C 4T1

1 ROCK sample received December

Values reported in ppm unless otherwise indicated

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn
1	SYN1	10	<.2	2.46	<5	115	<5	1.09	<1	17	23	35	3.85	<10	0.92	448	<1	<.01	9	260	20	15	<20

QC DATA:

Repeat:																							
1	SYN1		<.2	2.43	<5	115	<5	1.08	<1	17	31	34	3.80	<10	0.89	437	<1	<.01	8	250	20	15	<20
Standard 1991:			1.0	1.73	70	150	<5	1.77	2	20	59	86	4.03	<10	0.90	674	<1	0.01	29	730	24	5	<20

XLS/Kmisc#8
df/1004

Appendix iv

Norwest Labs

"We Solve Problems"

203 - 20771 Langley By-Pass
Langley, B.C. V3A 5E8
Phone (604) 530-4344
Fax: (604) 534-9996

WO (Lang.) : #7295
WO (Other) :

PO # :
Date Rec'd. : 25-May-94
Date Comp. : 27-May-94

Client	Received From
Name : Dave Duguay & C. Marlow Address : 2-E 7155 E.T. Canada Hwy. Kamloops, B.C. CANADA V2C 4T1 Phone : (604) 573-2845 Fax : Attention :	Name : Address : Phone : Fax : Attention :

Soil Analysis

Lab #	Sample Id	Cation Exchange Capacity me/100g
7295-1	253-1	16.1
-2	253-2	18.6
-3	253-3	15.6

Approved By _____
Dr. Thomas F. Guthrie, P.Ag.
General Manager

PACIFIC SOIL ANALYSIS INC.

SOIL AND PLANT ANALYSES

May 18/94

Northwest Mining Industries

ATTN: S.B. Butterchuk

Sample		← EXCHANGEABLE →				
		CEC	Ca	Mg	Na	K
		← me/100 gm →				
UNKNOWN → VID	1	13.3	6.00	6.00	0.38	0.88
	2	22.3	10.5	8.00	1.43	2.38
UNKNOWN →	3	19.7	9.50	7.25	0.73	2.18
	6	19.2	9.00	7.75	0.68	1.78

PSAL

#5 – 11720 Voyageur Way, Richmond, B.C. V6X 3G9 Phone: (604)273-8226

Norwest Labs

"We Solve Problems"

203 - 20771 Langley By-Pass
Langley, B.C. V3A 5E8
Phone (604) 530-4344
Fax: (604) 534-9996

WO (Lang.) : #6995
WO (Other) :

PO # :
Date Rec'd. : 03-May-94
Date Comp. : 05-May-94

Client	Received From
Name : Dave Duguay & C. Marlow Address : 2-E 7155 E.T. Canada Hwy Kamloops, B.C. CANADA V2C 4T1 Phone : (604) 573-2845 Fax : Attention :	Name : Address : Phone : Fax : Attention :

Soil Analysis

Lab #	Sample Id	Cation Exchange Capacity me/100g
	Duguay Soil	
6995-1	223-1	31.8
-2	223-2	29.7
-3	223-3	40.0
-4	223-4	42.2

Approved By _____
Dr. Thomas F. Guthrie, P.Ag.
General Manager

Eco-Tech
LABORATORIES LTD.

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GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Fax (604) 573-4557

CERTIFICATE OF ANALYSIS ETK 95-1

CHUCK MARLOW
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

5-Jan-95

2 CRUSH samples received January 3, 1994

ET #.	Tag #	*Water Retention & Capacity* (ml/100g)	*Oil Retention & Capacity* (ml/100g)	Density (g/cm^3)
1	W.C.	88.33	85.00	1.82
2	K.K.	85.00	76.67	1.94

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/95kmisc1

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Fax (604) 573-4557

CERTIFICATE OF ANALYSIS ETK94-990

16-Dec-94

CHUCK MARLOW
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

7 samples received November 29, 1994

ET #	Tag #	*Cation Exchange Capacity* meq. (NH3/100g)	*Water Retention & Capacity* (ml/100g)	*Oil Retention & Capacity* (ml/100g)	pH (units)	Density (g/cm^3)
1	B-1	30.7	26	28	3.45	1.80
2	B-2	42.1	50	20	3.53	1.90
3	B-3	24.7	28	20	3.00	1.99
4	B-4	29.9	16	16	3.52	1.91
5	B-6	35.5	20	20	4.50	1.98
6	B-7	32.6	26	16	5.59	2.01
7	B-9	28.9	24	16	6.41	2.10

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/kmisc8

Eco-Tech
LABORATORIES LTD.

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GEOCHEMISTI
ANALYTICAL CHEMISTI
ENVIRONMENTAL TESTIN

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-57
Fax (604) 573-45

" R E V I S E D "

CERTIFICATE OF ANALYSIS ETK94-923

CHUCK MARLOW
2E-7155 E TRANS CANADA HWY.
KAMLOOPS, B.C.
V2C 4T1

16-Dec-94

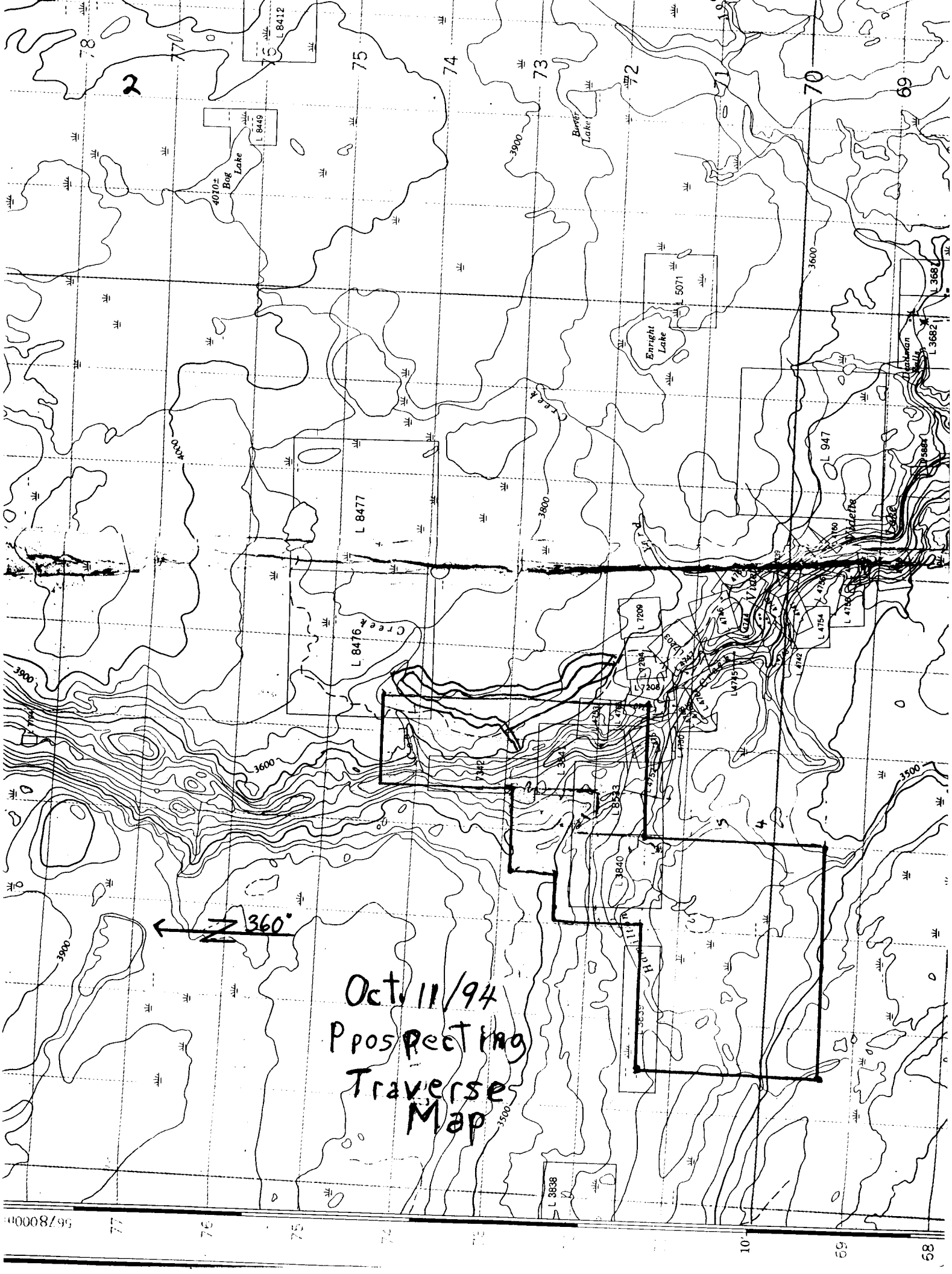
3 samples received November 2, 1994

ET #.	Tag #	*Cation Exchange Capacity* meq. (NH3/100g)	*Water Retention & Capacity* (ml/100g)	*Oil Retention & Capaci* (ml/100g)
1	B105	37.0	38	30
2	B108	35.7	44	56
3	D1	29.6	96	104

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/kmisc8

Appendix v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L 8477
L 8476
L 5071
L 947
L 3840
L 3838
L 3682
Beaver Lake
Bog Lake
Enright Lake
Creek
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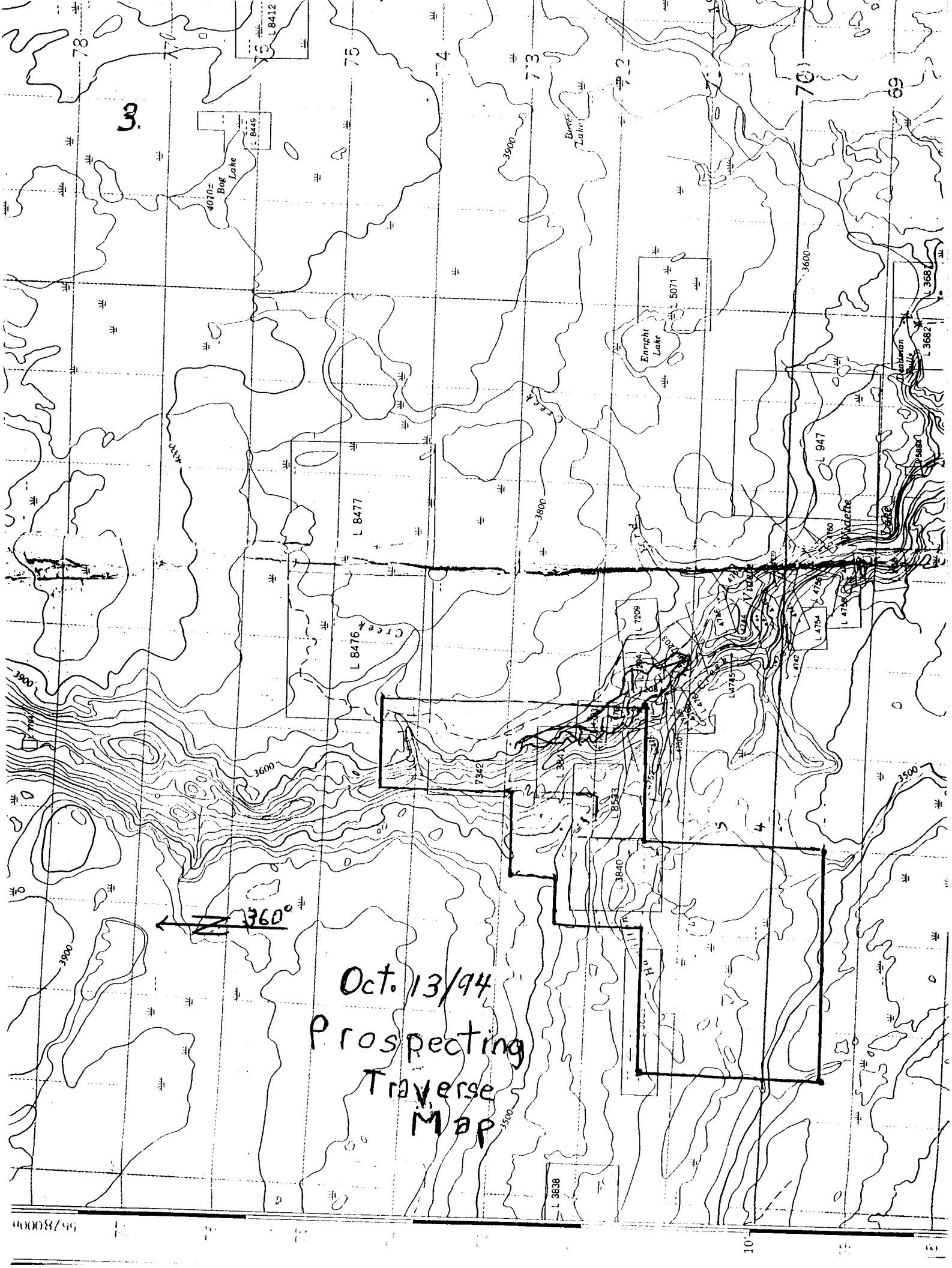
3800
3600
3500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Traverse
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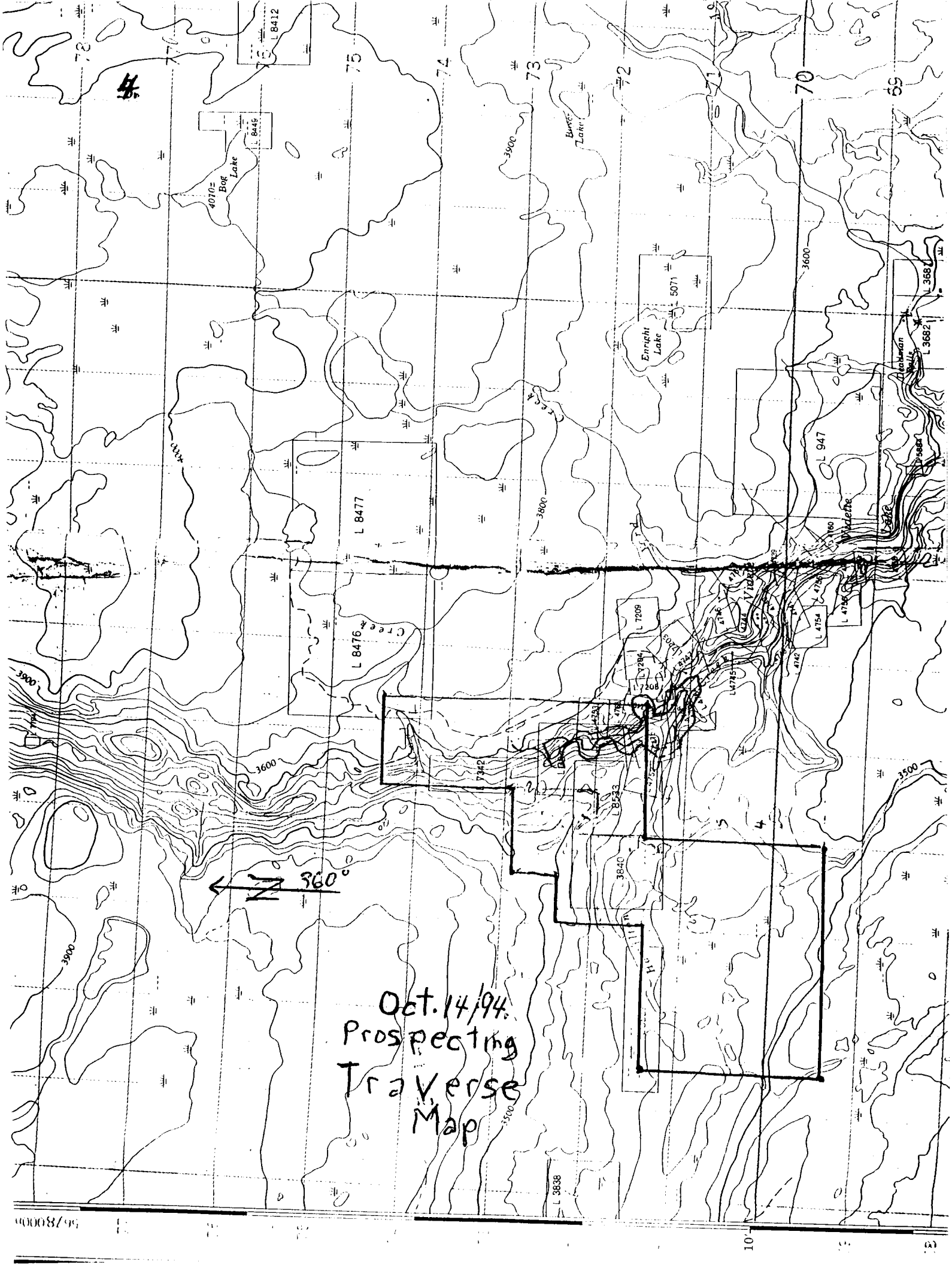
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Creek
Lake
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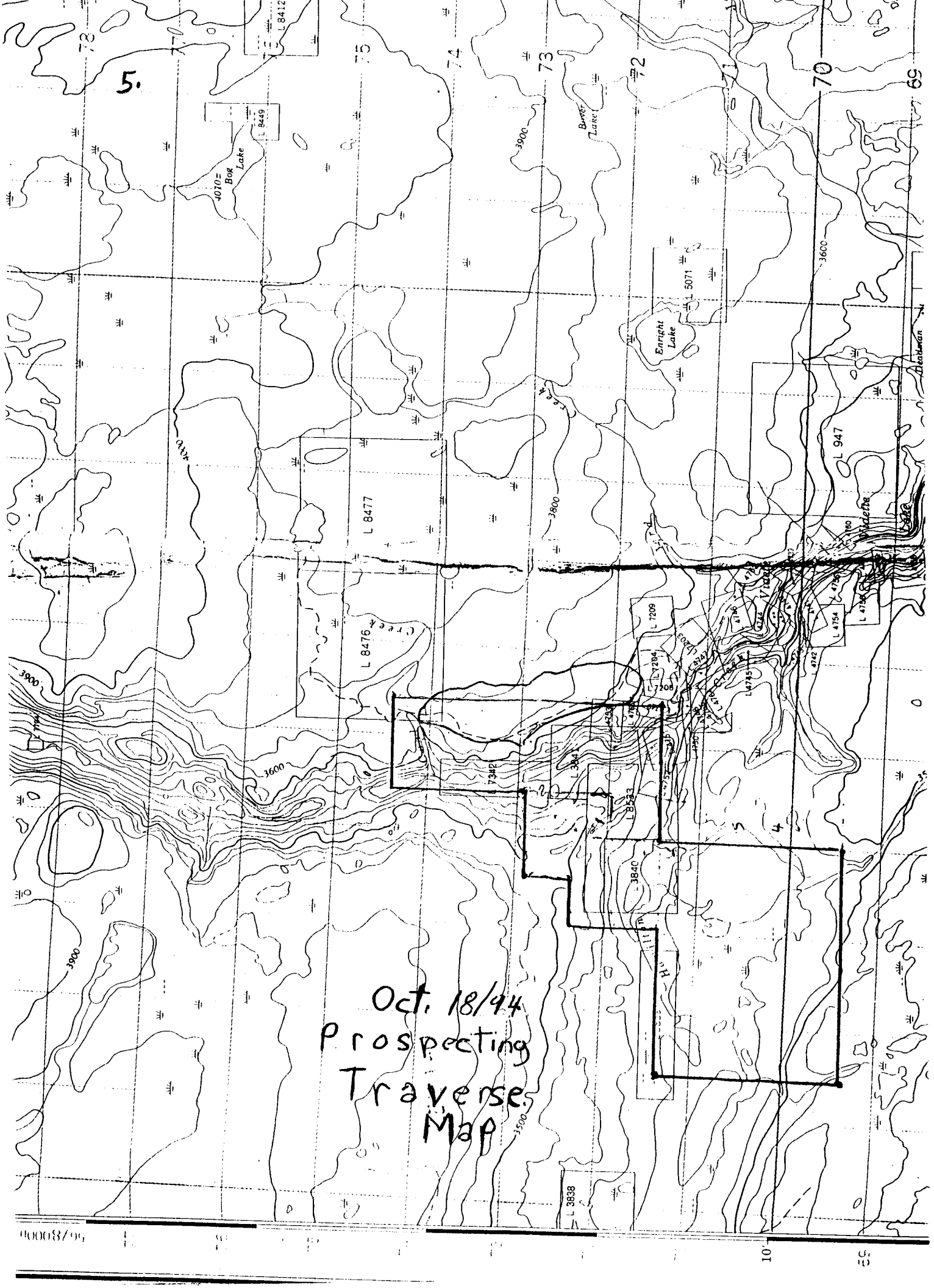
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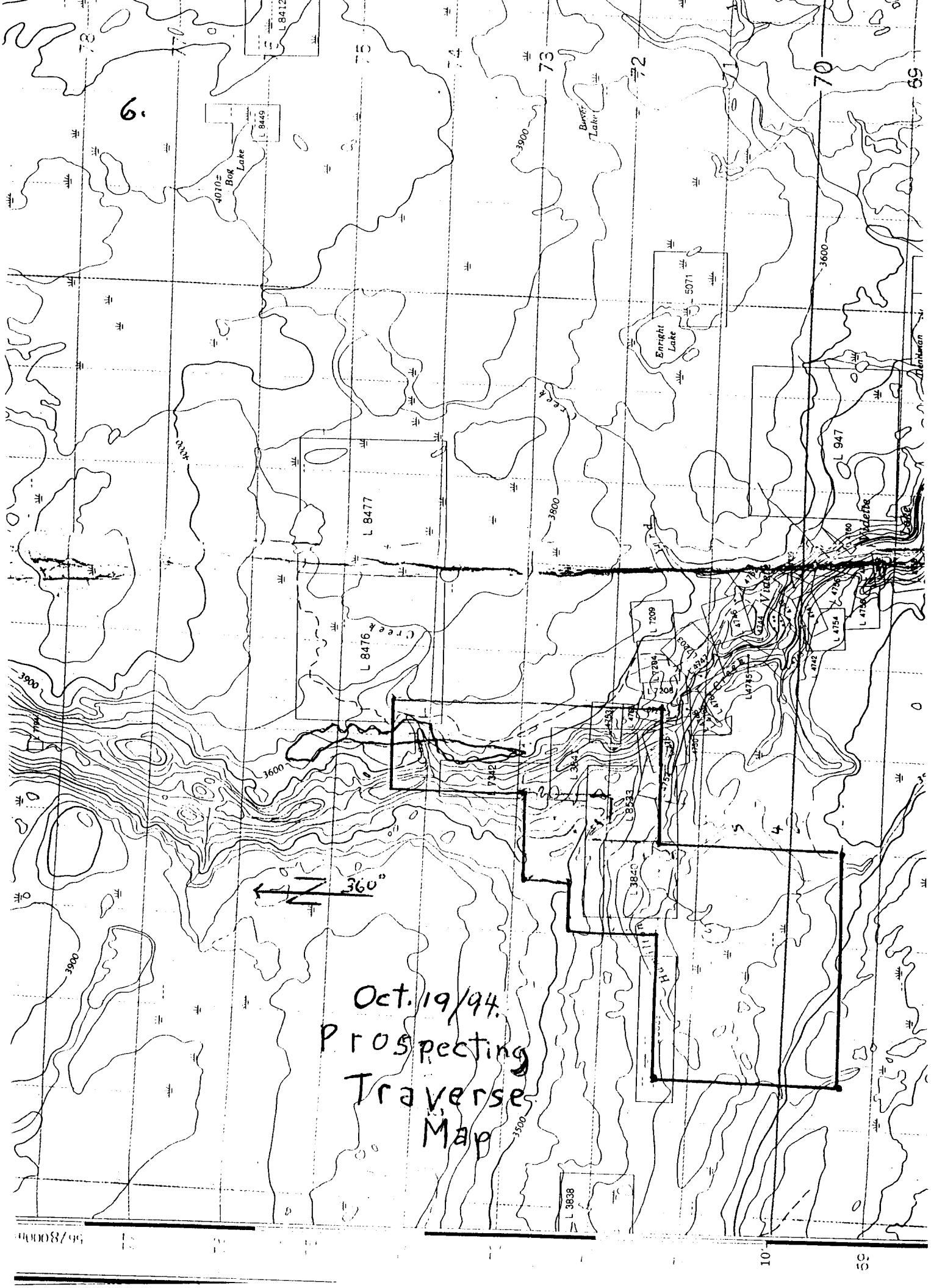
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L 3840
L 3841
L 4754
L 4742
L 4745
L 4746
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Videta Lake
3900
3600
3800
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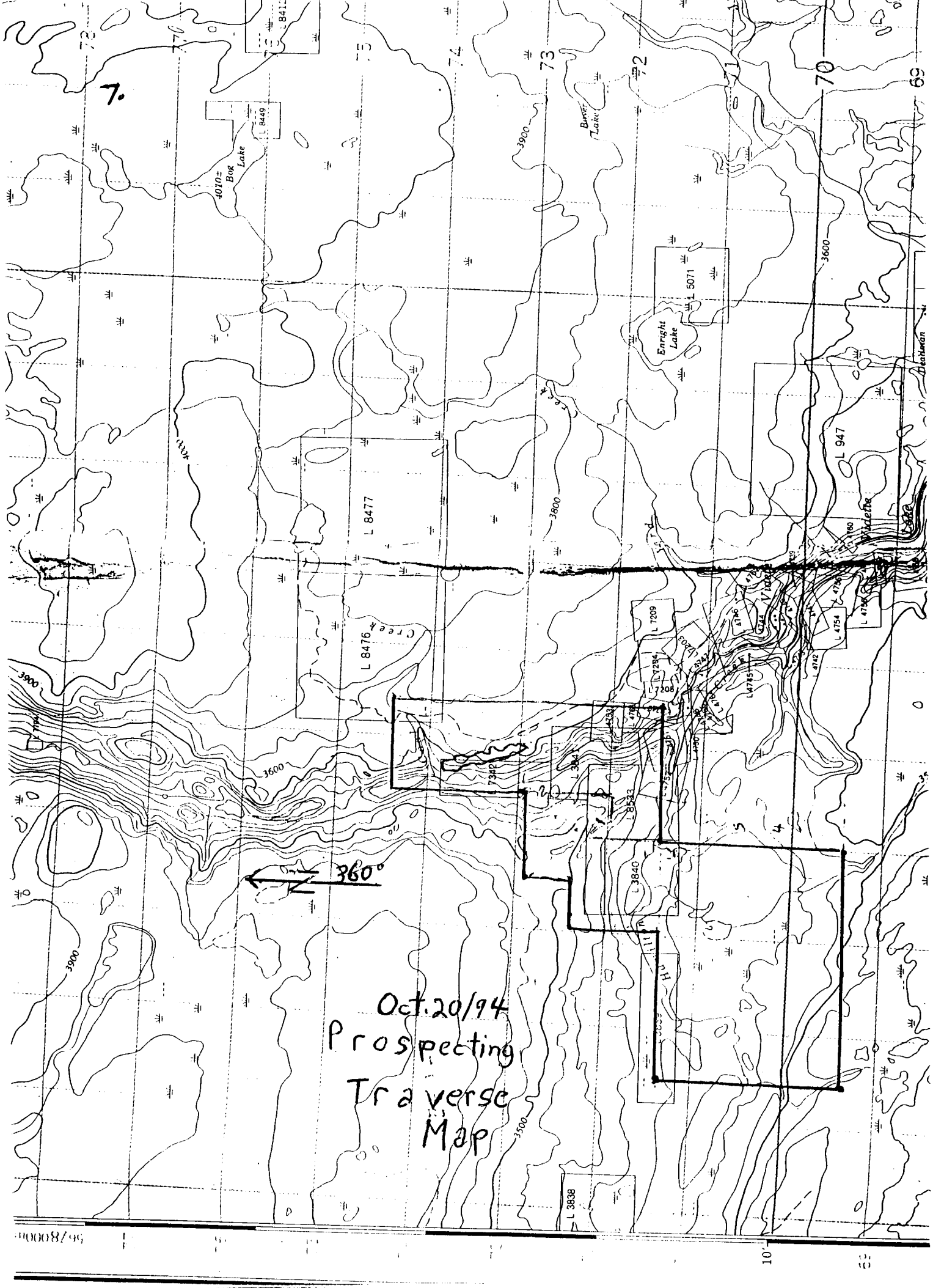
360°
Oct. 19/94.
Prospecting
Traverse
Map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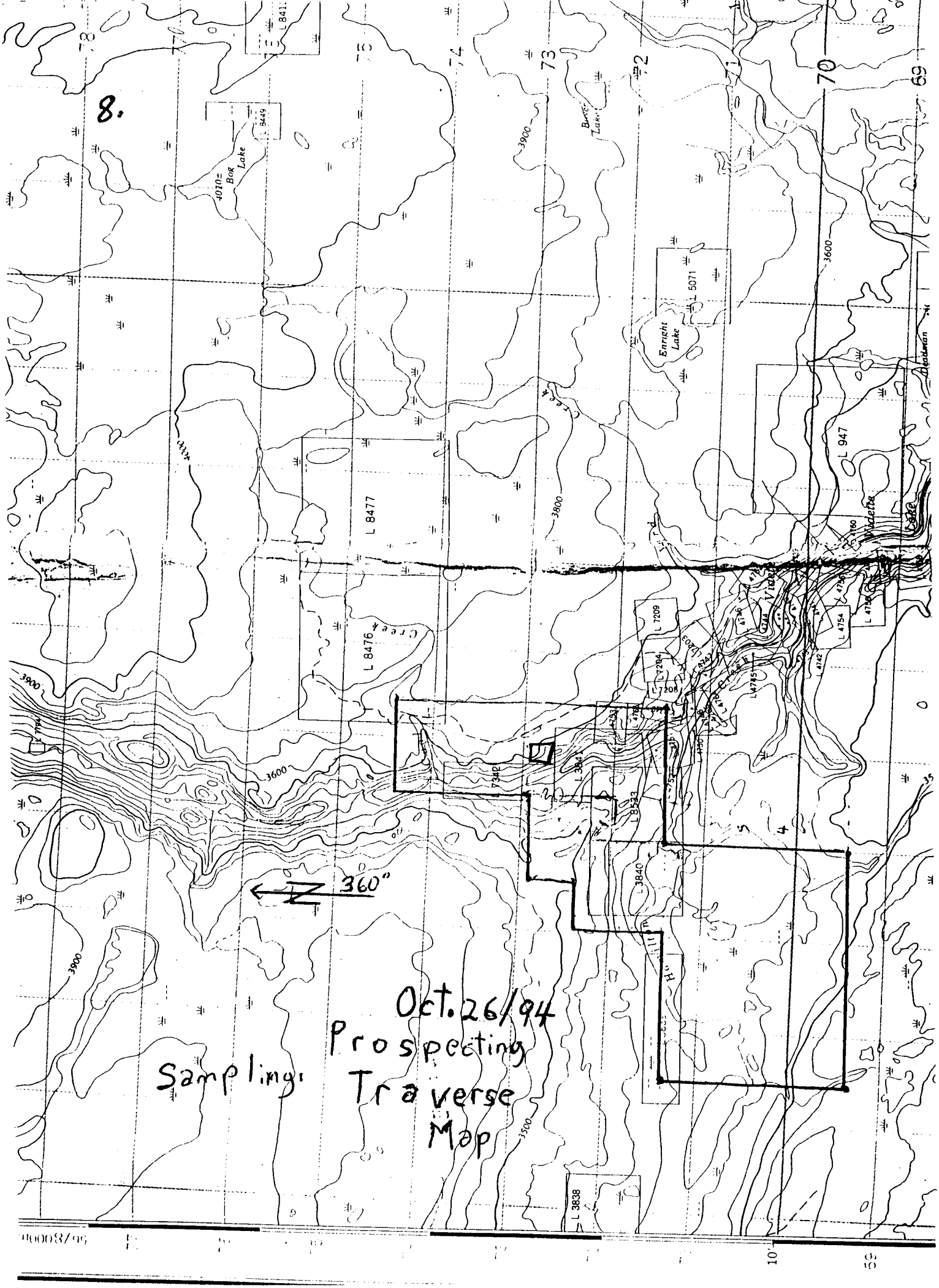
360°
Oct. 20/94
Prospecting
Traverse
Map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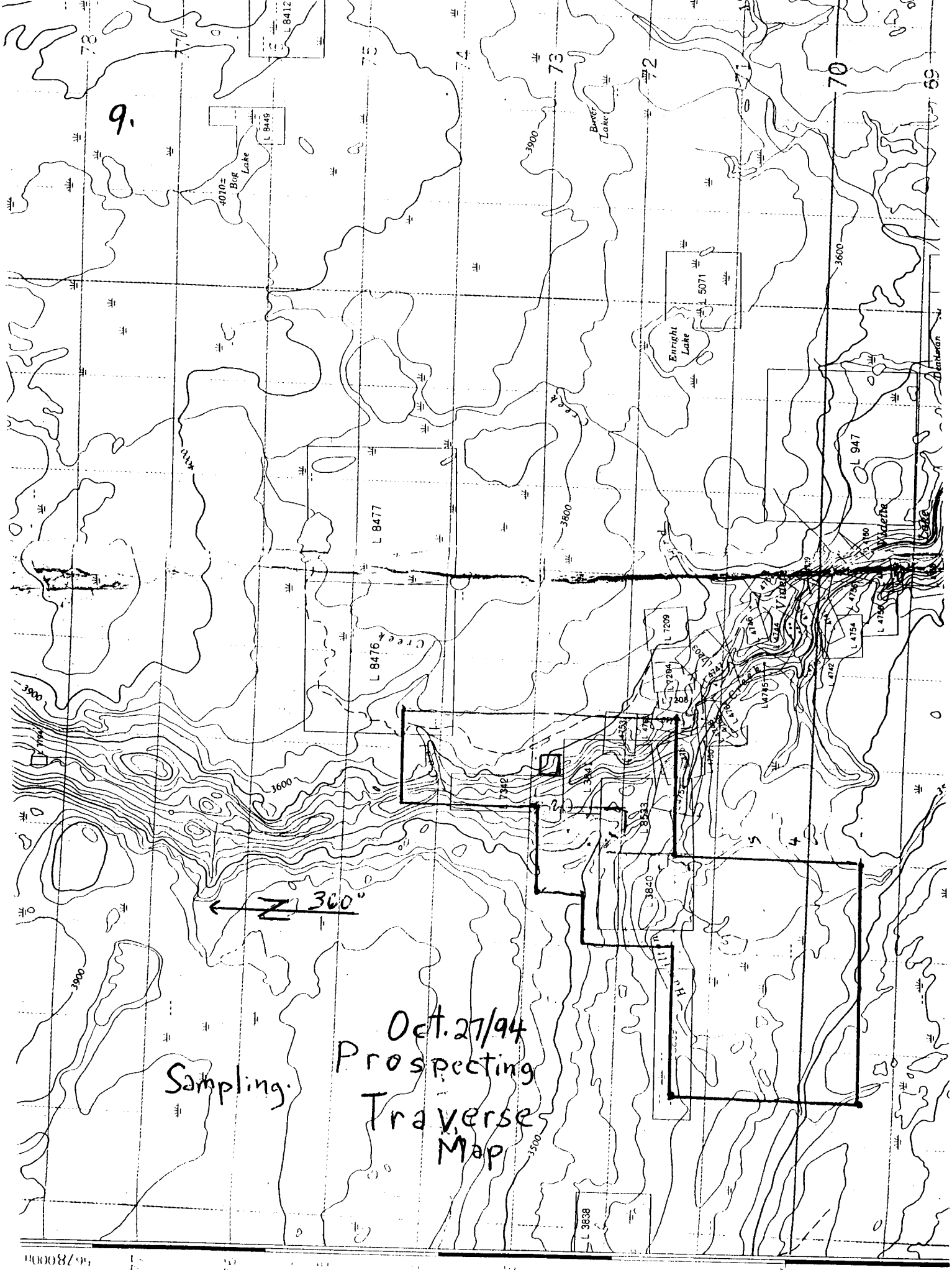
360"
Oct. 26/94
Prospecting
Sampling
Traverse
Map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Creek
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Prospecting
Traverse
Map
Sampling.
L 3838
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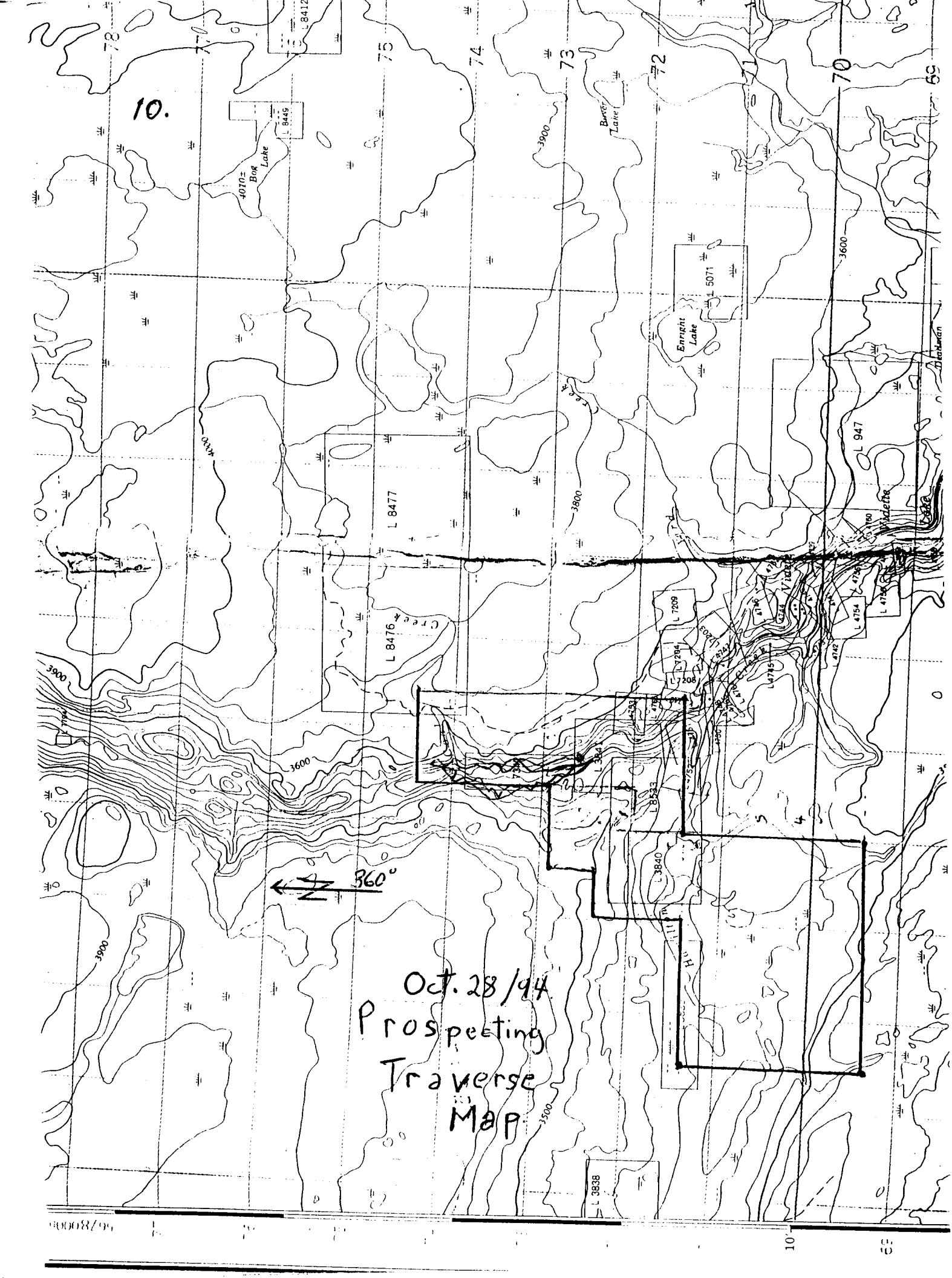
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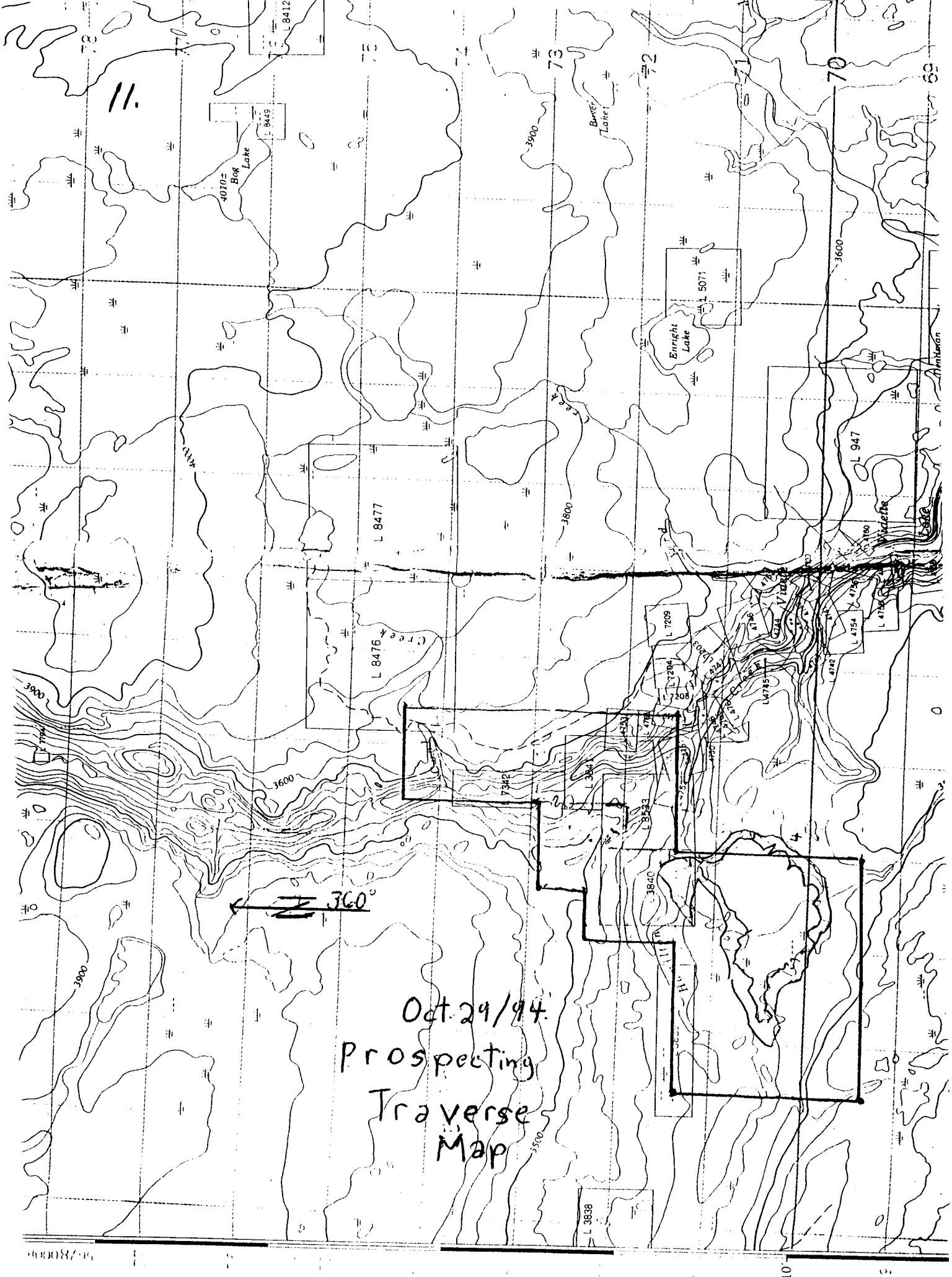
360°
Oct. 28/94
Prospecting
Traverse
Map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Oct. 29/94.
Prospecting
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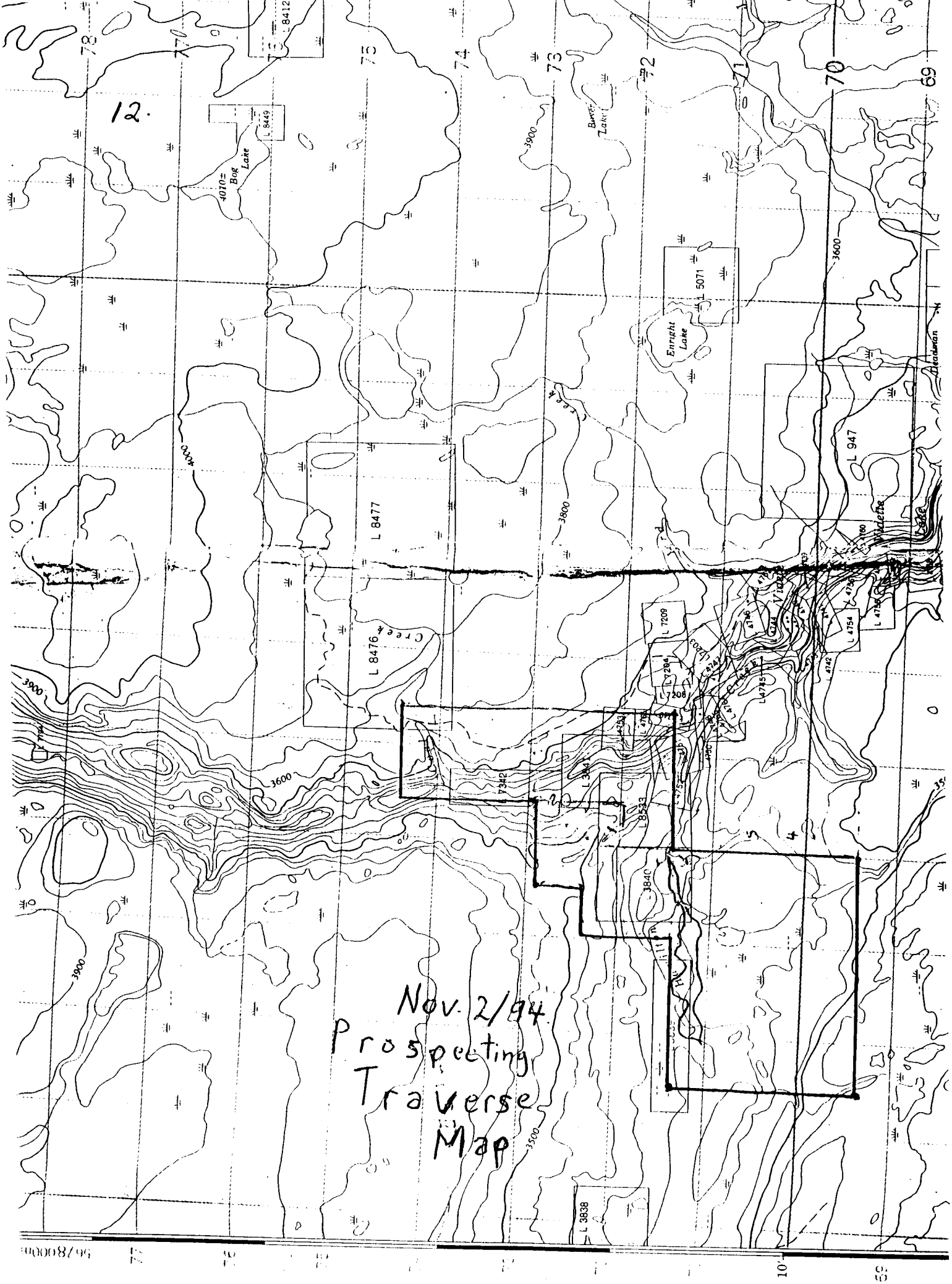
Map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Nov. 2/94
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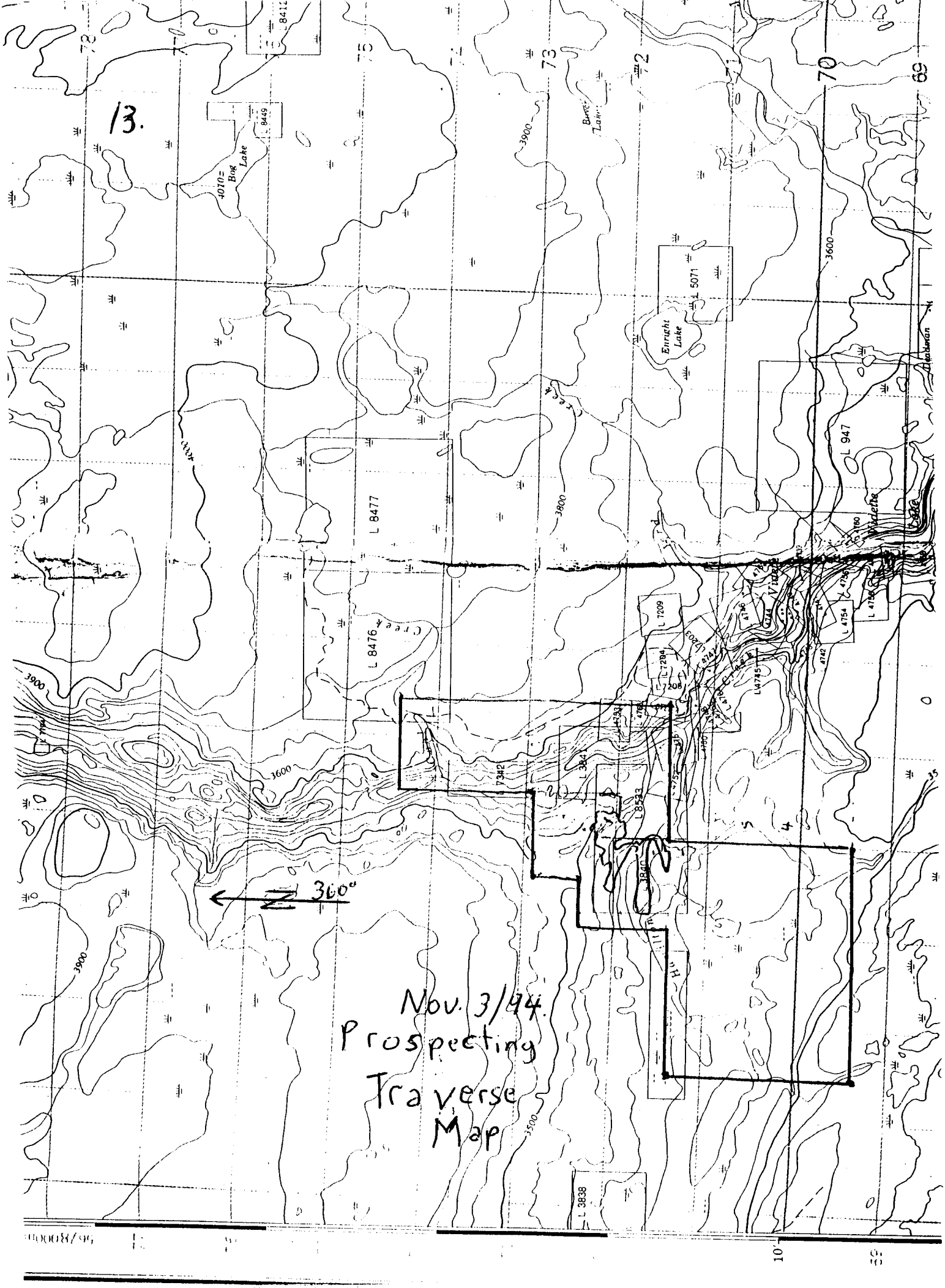
Bog Lake
Enright Lake
Creek
Trail
Claim Line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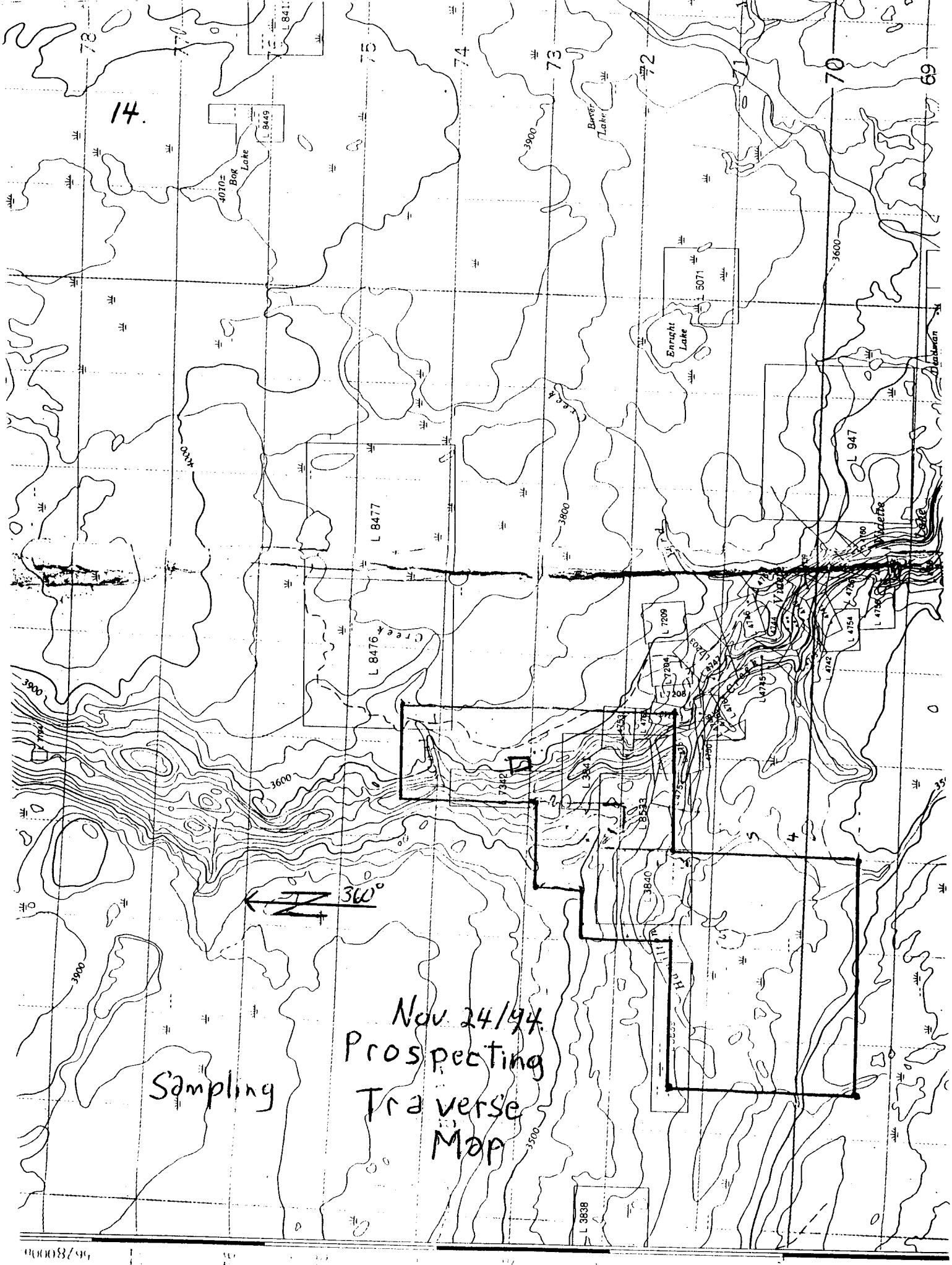
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Sampling
Nov 24/94
Prospecting
Traverse
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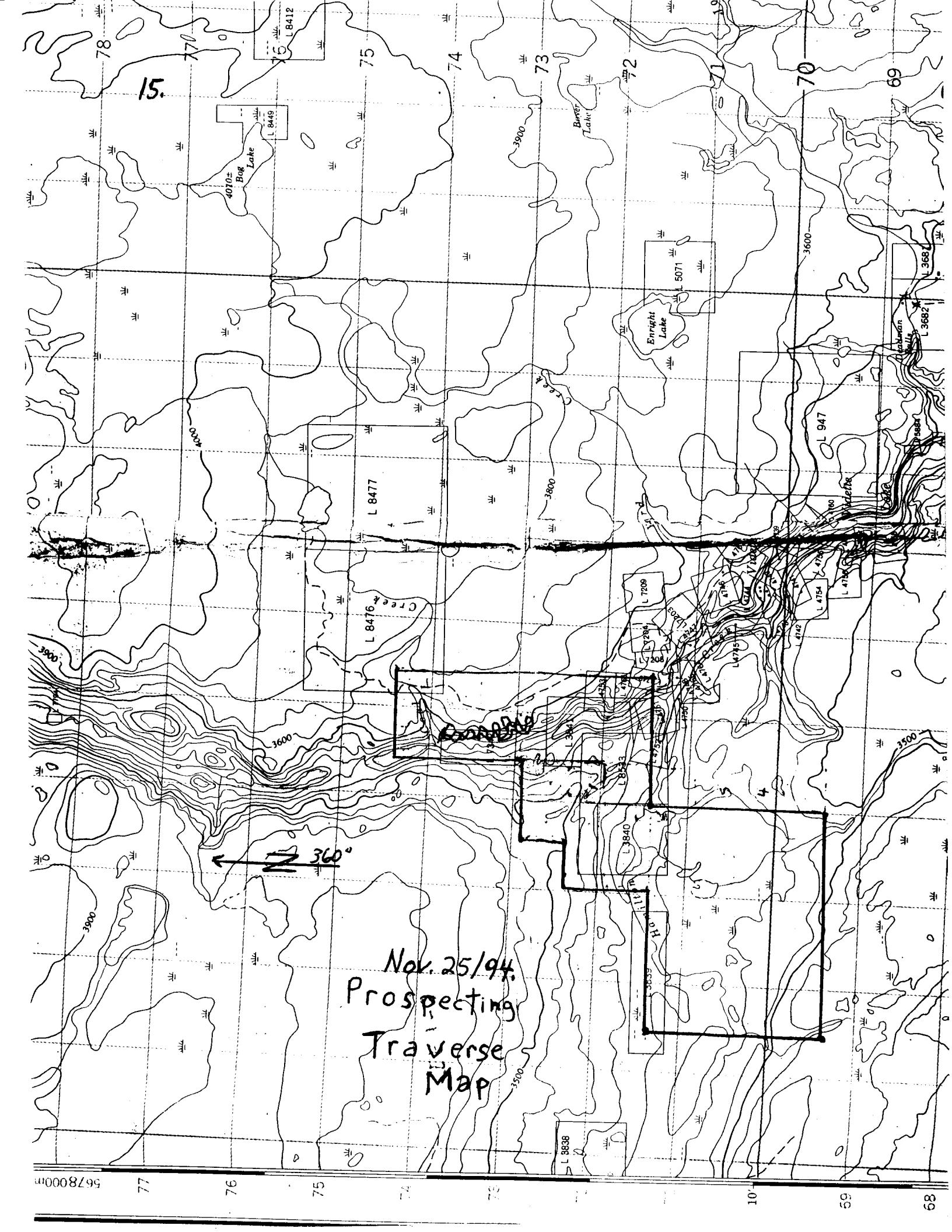
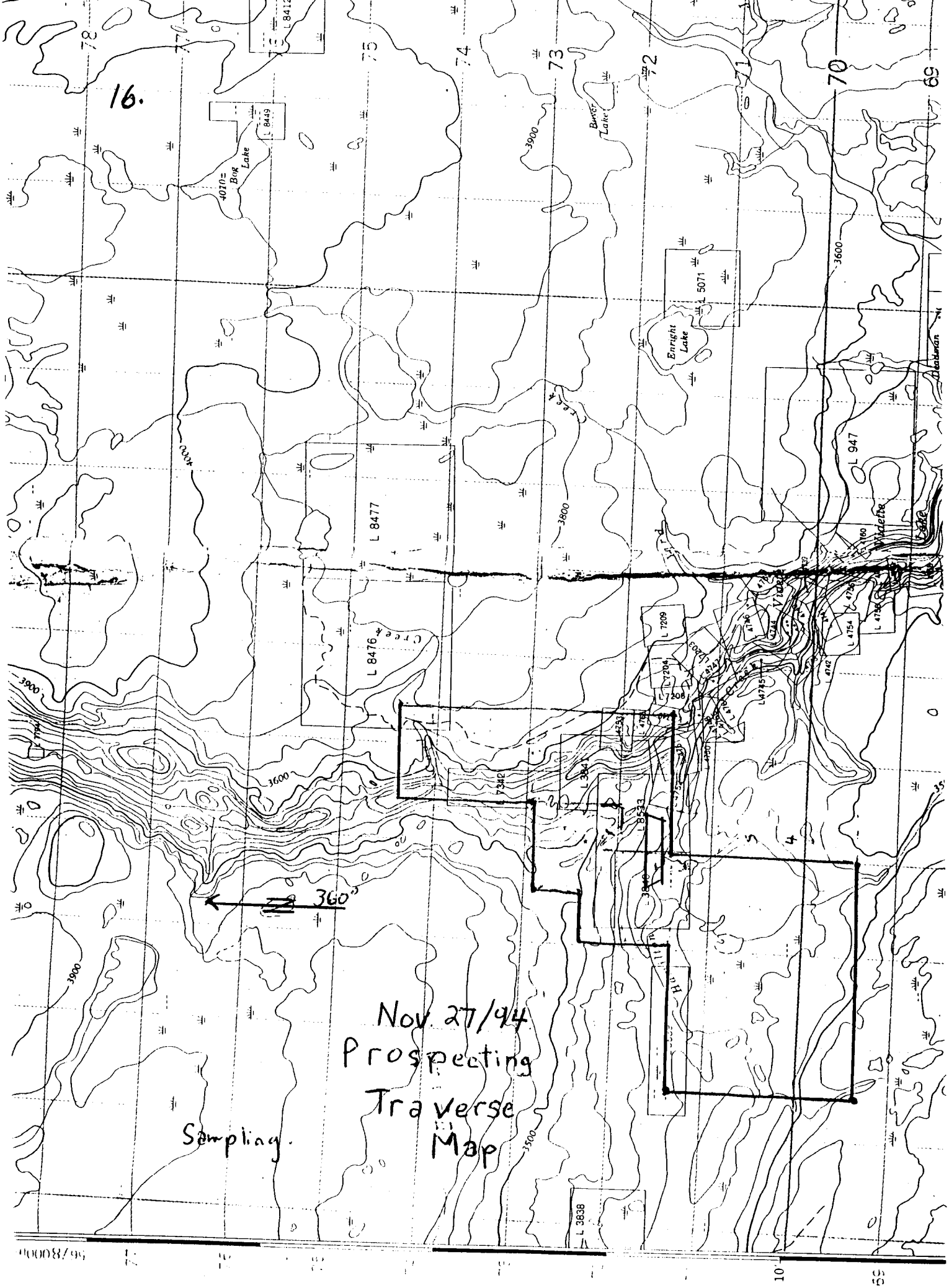

15.
L 8412
L 8449
Bog Lake
Beaver Lake
L 5071
Enright Lake
L 3682
L 947
L 8477
L 8476
Creek
L 7209
L 7204
L 7208
L 4754
L 3841
L 3840
L 3838
360°
Nov. 25/94.
Prospecting
Traverse
Map


16.
L 8412
L 8439
Bog Lake
Bunch Lake
L 5071
Enright Lake
Alabaman
L 947
L 8477
L 8476
Creek
Widette Lake
L 7209
L 7204
L 7208
L 4754
L 4745
L 4744
L 4742
L 4736
L 4731
L 3847
L 8533
L 3838
3900
3800
3600
3500
4000
360°
Nov. 27/94
Prospecting
Traverse
Map
Sampling.

Appendix vi

List of Personnel:

L.C. Marlow- 25 man days in the field- 2 days report preparation.

W.T.Hall- 18 man days in the field.

Richard Dupplessie- 5 man days in the field

Appendix vii

Appendix viii

Qualifications:

1. I Chuck Marlow successfully completed the Advanced Prospectors Course in Meschachie Lake in 1986.

2. I successfully completed the Petrology for Prospectors Course at Kamloops in 1991.

3. I have been involved in mining exploration for over over 25 years and extensivly since 1980.

4. I have worked for various exploration companies including Teck Explorations, Placer Dome and the S.M.D.C. L.C. Marlow.

5. I hold a B.C. Sand +Gravel/ Placer Supervisor Certificate.

Qualifications of other Prospectors:

W.T. Hall.

1. He has successfully completed Advanced Prospectors Course in 1987.

2. He has been extensively involved in exploration since 1984.

3. He has worked for several mining companies including Placer Dome.

4. He holds a B.C. Blasters Certificate.

Richard Dupplessie.

1. He has been involved in exploration since 1979.

2. He has worked for various mining companies including Teck Explorations.

the new protected areas, while existing activities such as hunting, recreation, and backcountry tourism will be allowed. Cattle grazing will continue to be permitted in the new protected areas, with the exception of the Junction Sheep Range.

A Regional Resource Board

A Regional Resource Board—covering the Cariboo Forest Region—will be established to provide local input on implementation of this land-use plan. The Cariboo Economic Action Forum will continue to provide advice to government on the development of regional economic strategies, priorities and action plans.

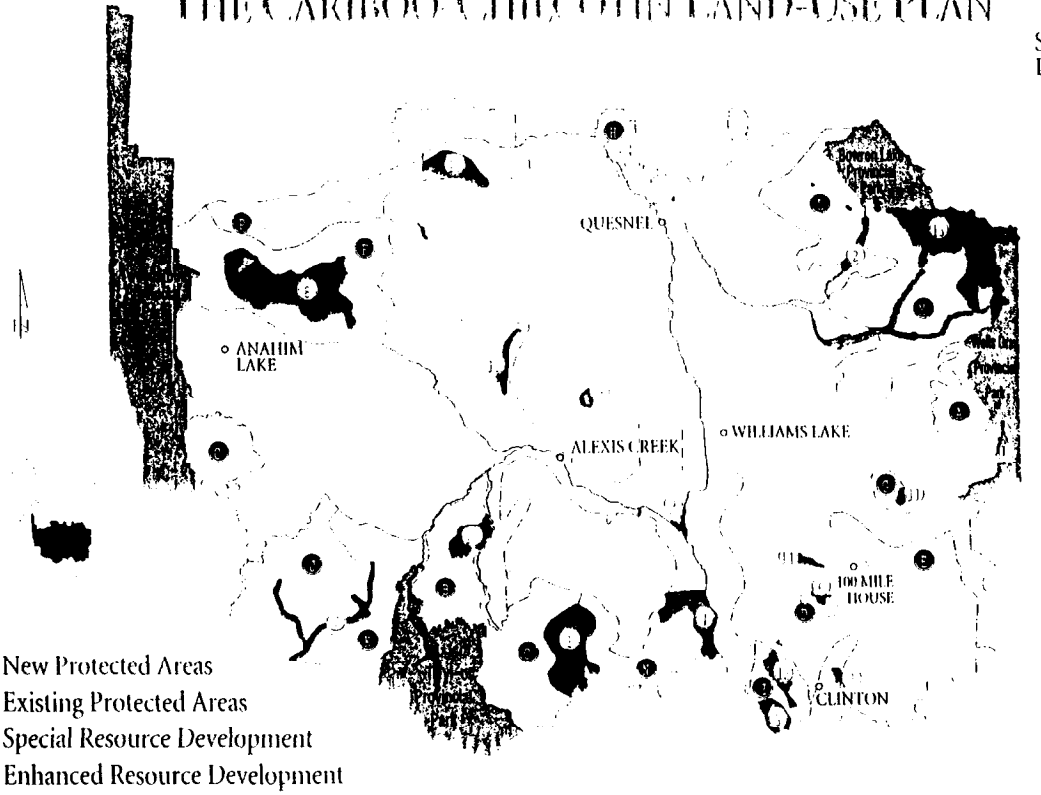
A Cariboo-Chilcotin Jobs Strategy:

Ensuring Worker And Community Security

The government has committed that jobs will not be lost as a result of major land-use decisions. The Cariboo-Chilcotin Land-Use Plan fulfils that promise, and goes further by creating new jobs:

- The Forest Renewal Plan has invested $3 million in the Cariboo-Chilcotin, creating more than 150 jobs in the region's forests.
- With this plan, a new Grazing Enhancement Program is being created: the Cariboo-Chilcotin ranching industry will receive $2.5 million per year to maintain or enhance cattle grazing opportunities in the region and meet conservation needs.
- The Cariboo-Chilcotin Jobs Strategy—being introduced with this land-use plan—will see about 1,000 jobs created over the next three years. Economic initiatives included in this strategy will be unveiled in the days and weeks following release of the land-use plan.
- A new, full-time Resources Jobs Commissioner will be appointed to work with companies, workers, communities and government to secure stable resource jobs now and in the future.
- Under the government's Skills Now training plan, two Community Skills Centres will be established, and five small business partnerships and at least two sectoral training partnerships created.

The Cariboo-Chilcotin Land-Use Plan



New Protected Areas
Existing Protected Areas
Special Resource Development
Enhanced Resource Development
Integrated Resource Management

October 1994

Special Resource Development

A. Boss / Deception
B. Brittany Triangle
C. Charlotte Alplands
D. Flat Lake
E. Interlakes
F. Itcha Ilgachuz
G. Lang Lake / School House
H. Lower Blackwater
J. Marble Range
I. Niut
K. Potato Range
L. Quesnel Highlands
M. Quesnel Lake
N. South Chilcotin
O. Tasko Lake
P. Upper Blackwater

New Protected Areas

1. Big Creek / South Chilcotin
2. Cariboo River
3. Chasm
4. Churn Creek
5. Edge Hills
6. Flat Lake
7. Homathko River / Tatlayoko
8. Itcha Ilgachuz
9. Junction Sheep Range
10. Kluskoil Lake
11. Lang Lake / School House
12. Marble Range
13. Mitchell Lake / Niagara
14. Moose Valley
15. Nazko Lakes
16. Stum Lake
17. Tasko

Government of British Columbia

223-1
31.8 CEC.

× 253-3
16.1 CEC.

Bentonites

Nicolas

North
360°

L 3+50·E.
9+00·N.

Coal creek

B.L.
9+00 N

D·05.
(1m)

Nicola Vol.

Nicola volcanics
Green Augite Porphyr

R 60 W
(1m)

INSET.

Road

Slump

Slump

B1 B2 B3 B4 B5 B6 B7 B8 B9

× 223-4
CEC #2·2

Grab.
Pos·?
29.6 CEC.

Partially Altered Gravel

360°

Samples:	Thickness	CEC: me/100g
B1	1·75m	30.7
B2	1·2 m	42.1
B3	1·6 m	24.7
B4	1 m	29.9
B5	3 m	37.0
B6	1 m	35.5
B7	2·5 m	32.7
B8	9 m	35.7
B9	6 m	28.9

The only difference in layering that can be discerned by eye is colour (due to weathering) and texture size.

Dip Directions. ↙

4cm = 25 meters.

× 223-2
29.7 CEC.

2·00·E
4+00·N

R-380-N
(8m)

× VID-2
22.3 CEC.

Grab Sample (Subcrop)
D-72 (1·5m)
Pos? (3·25m)

D·04 (2·5m)

Basalt Sub-crop

Basalt Out-crop

Slump

× 223-3
40 CEC.

Nicola Volcanics

0+00

See Insst

CAMP

L 0+50·S
5+25·E.

2·00·E
1+00 S

LAKE.

Slump

× 253-1
16·1 CEC.

2+50·S
3+00·W

Nicola S

Andesites.

Bentonites

WB01
×

Nicola Volcanics Columnite veins

B.L.
2+00·S.

Basalts
Subcrop

Basalts.
Sub crop.

Nicola Volcanics

Basalts

Slumps

Slumps

Slump

3300 Road.

↖ 49-Kms. to railway

2nd
× Camp

Old road.

Bentonite

33-05 (2m)
-02 (1m)

Slump

33-04 (1m)

33-09 (2m)

2801.
1m thick x 10m long.

VID-6
19.2 CEC.

5 meters above = not sampled.

33-01 (2m)
-02 (2m)
-03 (1m)

× 255-2
CEC 18·6

L 3+00·W.
16+25·S.

Nicola Volcanics (Andesites)

3300 Road.

Bentonites

L 12+50·W.
16+00·S.

Hamilton Creek.

Basalts

Legend:

Lines by sample #'s are direction of sampling /

Scale: 4 cm = 100 meters.

North 360°

Channel direction on south of property

Mior Coal creek direction

By: L.C. Marlow.